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THE NORTH DAKOTA FARMER



"THE NORTH DAKOTA FARMER FOR NORTH DAKOTA FARMERS"

Alex Alin

511

Vol. 10, No. 3
LISBON, N. D.

SEPTEMBER 15, 1908

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FARGO, N. D.



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THE NORTH DAKOTA FARMER

Vol. 10, No. 3

LISBON and FARGO, N. D., SEPTEMBER 15, 1908

50 Cents a Year

MY EUROPEAN TRIP

By PRES. J. H. WORST, N. D. A. C.

AT DUSSELDORF

THE GERMAN AGRICULTURAL EXHIBIT J. H. Worst

Germany gives substantial encouragement to agriculture and to the breeding of improved live stock. Once every year, in some city selected by the Agricultural Association, the imperial government gives aid for an exhibit of agricultural and dairy machinery, steam, gasoline and alcohol engines and live-stock of every description. These exhibits are held in a different city each year and the government not only offers prizes and medals for things of exceptional merit, but grants a subsidy to meet a large portion of the exhibition expenses.

The exhibition of 1907 was held in Dusseldorf the second week of June and was one of the best of its kind to date. We had the pleasure of a several days' visit to this exhibition and cannot praise the management too highly for its excellence in every department and the effort made to render it educational rather than amusing.

The exhibition ground covered about 200 acres, which was enclosed by a high board fence. The interior was conveniently platted for exhibition purposes and all available space was filled with machinery of every description both of domestic and foreign manufacture; also livestock of almost every breed and type, even to pigeons and rabbits, together with much that was of a miscellaneous nature, but all illustrative of German agricultural and manufacturing enterprise. The grounds were literally crowded from early morning until late at night with people from all the German states and bordering countries. The interest here manifested in industrial progress and achievement would do credit to any country.

Machinery

Much of the farm machinery, especially implements such as plows, har-

rows, cultivators and even threshing machines seemed clumsy and awkward in design, tho newer and improved models of the same were on exhibition. For this type of farm machinery the American made implements certainly excelled in general appearance if not in durability. But when it came to steam and gasoline engines of which there was an

complex engine or machine there are no exposed shaftings or cog wheels to catch one's clothing or crush one's fingers. Every wheel on every machine is required by law to be protected by a shield sufficient to make it safe to operator or bystander. Life and limb are considered of more importance than cheaper and consequently more dangerous machinery.

The exhibit of dairy machinery was very elaborate, almost every country being represented with its different styles of separators, milk coolers, churns



In the Hague Woods.

almost endless number and variety, the European models are difficult to excel. Beautiful in design and almost perfect in workmanship these hundreds of engines were running the livelong day with a smoothness and elegance that challenged admiration. From the 2 H. P. up to the 250 H. P. stationary engines, the movements were almost noiseless.

One thing I admire in German made machinery; the government requires them to be safe. From a fanning mill or grindstone up to the largest and most

butter workers, cheese-making implements, etc., for both hand and power purposes. Denmark and the United States were well represented with these goods. Germany, Belgium and England, however, also exhibited a good variety of dairy machinery and utensils. The dairy exhibit was exceptionally fine in every particular.

Use of Denatured Alcohol

Considerable interest was manifested in the various uses made of denatured alcohol for running engines and for various

domestic purposes. To a layman the difference between gasoline and alcohol for power purposes is not so noticeable. Apparently the same sort of engine is used and the same degree of power produced. As to the relative cost of operation it seemed difficult to get at bottom facts. The statement was made at Dusseldorf that alcohol, 90% strength could be purchased for six and one-half cents per liter, or approximately 29 cents per gallon. A 2 H. P. engine requires one liter (1.76 pints) per hour, to operate, tho the larger the engine the less it costs relatively per horse power. We inquired of a dealer in denatured alcohol, at Warburg, its price when purchased in quantities for power purposes. He quoted alcohol at a somewhat lower price than was quoted at Dusseldorf and gasoline was quoted at about 42 cents per gallon. At Oldenberg, denatured alcohol was quoted higher than at Warburg. It is exceedingly questionable in spite of the exploiters of alcohol engines and their claims for its use, whether the price of denatured alcohol is not yet too high to bring it into general use even when its safer character is taken into account. The fact remains, denatured alcohol is not generally used in western Germany.

Alcohol makes an excellent illuminant. One liter will supply a 75 candle-power lamp for 13 hours and makes a clear, soft light. For cooking purposes it also is highly recommended and requires one liter per hour for each burner, at full flame. A heater that will require nine-tenths of a liter per hour will heat a

were many types representing the beef, dairy and work breeds. The Holstein Fresian predominated in the dairy exhibit, tho many other breeds were on exhibition—several of them new to me. I was particularly impressed with the massiveness of a type of animal evidently

to size and color, occupied the goat stalls. Most of them were of milk producing strains and had udders almost or quite as large as the average scrub cow and would doubtless yield as much and far richer milk, on considerably less feed. The laboring class quite generally use

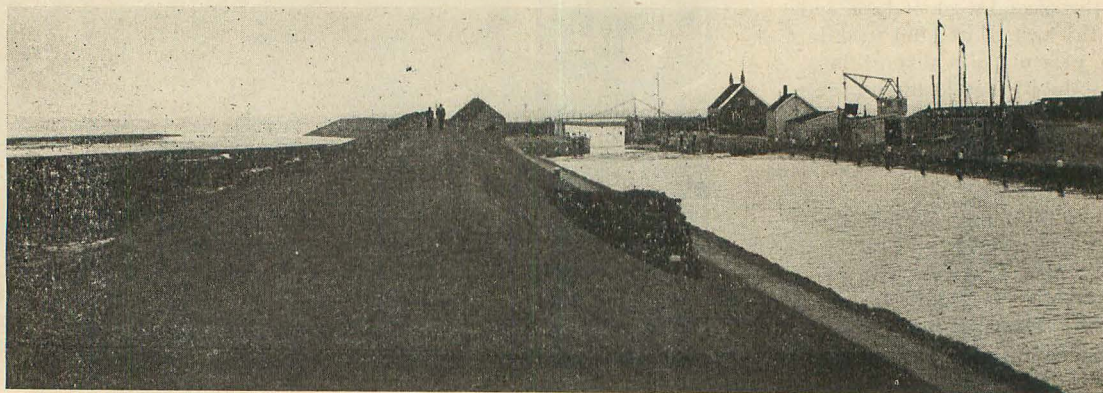


A Holland Scene.

bred up from the Brown Swiss and used for heavy freighting. They were fawn colored but of immense size, with short legs, large horns and apparently of docile disposition. The females were much smaller than the males. There was another breed of about the same

goats' instead of cows' milk.

The hog show was good. There were hundreds of individuals on exhibition, from the razorback to the most improved breed, but the hog show was hardly up to that of the cattle or the horses.



Dyke and Canal, Holland.

room of 125 cu. yds. in Germany. The use of denatured alcohol is being urged for many other domestic purposes thruout Germany on account of its non-explosive character rather than its cheapness.

Livestock

The exhibit of livestock consisted of horses, cattle, goats, hogs, sheep, turkeys, geese, chickens, ducks, fish, pigeons and rabbits. There were hundreds of animals in each class. Of cattle there

color but small and of exceedingly restless or nervous disposition. This latter breed comes from the mountain districts of Germany and are said to be fairly good milkers.

There seemed to be no distinct German breed of sheep tho numerous breeds, generally of English coarse woolled types, were on exhibition and many of them, as must be said of the cattle, were fine individual specimens.

An endless variety of goats, both as

The horse show was exceptionally fine, the Belgian and Coach types predominating, tho some good specimens of the Percheron breed mingled with the others. The German government pays large attention to horse breeding and furnishes breeders with free service of stallions for the special purpose horses she needs; viz., for heavy draft and for the artillery and cavalry branches of her military establishment. For magnificent heavy draft teams, almost per-

factly matched in size and color, and rigged out in harness the best and most attractive that human skill has yet produced, those German teams could not, in my opinion, be excelled in any country. And many such teams were on exhibition.

For the artillery a smaller but stocky and somewhat springy animal is bred, with an apparent strain of Belgian blood in his veins. A fine exhibition drill was given with light and heavy ordinance and it could readily be seen that the horse and the gun carriage were exactly suited to each other.

The cavalry horse is lighter, longer of limb, spirited and was evidently bred up from the Coach type. With their dressily uniformed mounts, and moving with almost perfect precision to the martial music, the cavalry exhibition drill was worth going a long distance to see. Both the artillery and cavalry maneuvers were such as to impress a foreigner with the fact that Germany makes war, or preparations for war, anything but secondary matters.

I understand that where the German government furnishes free stallion service it has an option on every colt thus bred—and purchases the very choicest of them all, for breeding or for other government uses. Moreover, the government fosters the breeding of the exact types of horses that are most serviceable for draft, artillery or cavalry purposes.

Miscellaneous

The miscellaneous exhibits, incidental to a great industrial exhibition were of equal merit with the more particular things already described. The cafes were numerous and the large crowds were furnished with refreshments at reasonable prices. Beer seems to occupy a conspicuous place on a German bill of fare.

Taken altogether the Dusseldorf agricultural exhibit was of the very highest rank. Horse racing, vaudeville and other amusements were conspicuous by their total absence. The exhibit was for business and for educational purposes and was most liberally patronized with this end in view.

Germany aims to improve Germany in every legitimate way, chief among which is to improve and strengthen her agricultural resources and manufacturing possibilities. To this end her educational system is largely directed and industrial improvement sought by means of government subsidies for exhibitions such as the one here described.

The German people as a rule are patriotic. They look beyond the Germany of today and dream of a greater Germany for their descendants. They are economical of their coal and iron de-

posits and other natural resources, and plant their waste lands with timber, which they cultivate as carefully as they do their gardens. Nothing is wasted. The Germans are a great people and they know how to conserve the resources of their country for present and future purposes. A comparison between American and German methods may seem odious, but the truth is sometimes odious—to a certain class. We are rushing with frightful speed toward timber exhaustion, starting only a few years ago with a timber and fuel asset that seemed burdensome. Germany's timber and fuel supply is growing larger and better every year. Ditto with our coal mines and gas and oil wells. Germany is husbanding her soil fertility with sensible frugality. We are shipping, annually, fertility from the northwest that alone is worth approximately in the markets of the world what we get for our wheat. Much of this fertility finds its way to foreign fields—and tho our country is still new the fertility of our land is diminishing as our forests are diminishing. Germany is an old, old country, yet the productive power of her soil is improving every year. The time will come when we must follow in Germany's footsteps, hence these remarks. Take Rhineland as an example. Note the progress made in a country farmed for 2000 years.

Progress of 100 Years

	A. D. 1800
Value of soil	500,000,000 M (M=24c)
Yield of soil,	138,000,000 M.
Val. of animals,	60,000,000 M.
Value of meat,	25,500,000 M.
Value of milk,	23,000,000 M.
Value of labor,	40,000,000 M.
	A. D. 1900
Value Soil,	2,500,000,000 M.
Yield,	590,000,000 M.
Animals,	480,000,000 M.
Meat,	190,000,000 M.
Milk,	161,000,000 M.
Labor,	150,000,000 M.

Development of Animal Industry

	A. D. 1816	A. D. 1906
No. of cattle,	609,960	1,200,781
No. of horses,	94,564	204,019
No. of swine,	195,466	1,119,234

Average Weight of Livestock

	A. D. 1816	A. D. 1906
Sheep,	59 lbs.	90 lbs.
Swine,	165 lbs.	273 lbs.
Cattle,	495 lbs.	1111 lbs.

These remarkable improvements in the number and weight of animals and yield of grain are attributable to the influence of her agricultural schools and experiment stations. A very old country improving her natural resources should prove a salutary lesson to a new country traveling rapidly in the opposite direction. Can we take a hint?

STOCK DEPLETION RESULTS

One of the state veterinarians of North Dakota, says the Jamestown Alert, who travels extensively over the central and western parts of the state, says that the last three years of fair crops have accompanied a falling off in live stock on the farms. A few years ago nearly every farmer had more or less live stock to sell during the year. There was quite an increase in the number of sheep in central and western North Dakota. But with the increase in the price of land due to the several grain crops and the comparative ease with which such crops could be grown, many farmers sold off all their surplus cattle, horses and sheep, and did so on the excuse that prices were too low for profitable stock raising.

This apparently sound argument was refuted by many authorities, and by men of experience at that time and it was pointed out that then the low price of stock, cattle and sheep could not long prevail.

But notwithstanding this experience of recovery from low prices, a large amount of stock in central and western North Dakota, was disposed of, and little or no effort made to replace the same.

Formerly there were a good many sheep to be bought west of the James river, from individual farmers and small sheep raisers. Today it is said that there could not be a train load of sheep purchased between Jamestown and the Missouri river. The records of the St. Paul Union stock yards show that from Jan. 1 to July 22, 1908 there were only 100,287 head of sheep marketed from all parts of the northwest tributary to St. Paul's market. There were during the same period 167,884 head of cattle of all kinds and 677,944 head of hogs. But it is encouraging to note that 34,181 more cattle were received this year than during the same period last year, and there were 152,711 more hogs and 21,957 more sheep. But this increase is only a small one when considering the large area of country tributary to that market.

The prices of steers are now ranging from \$6 to \$6.75 live weight. A fairly good steer, partly grain fed will bring from \$5.65 to \$6 per hundred weight. Grass fed steers sell for \$5 per hundred, stockers and feeders weighing from 900 to 1000 pounds, bring from \$3 to \$4.25, the hogs range in price from \$6.30 to \$6.50 and sheep from \$4. to \$4.50, the spring lambs \$6 to \$6.25. These prices show that the farmer who quit raising stock two or three years ago, made a mistake.

Experience with grain raising alone bankrupted many of the early farmers in Iowa, Nebraska, Minnesota and South Dakota. The cow and the steer, the hog and the sheep saved many other farmers who abandoned grain raising as the main occupation of the farmer. Now it is seen that the prosperous farmers in those states are the men that raise grain as a side issue, and do not depend upon the yield or the price for their success or a livelihood. The sooner that such conviction is forced upon the many farmers in North Dakota, the better it will be for them, and for the state.

In addition to the raising of live stock for the market, there comes the side products of butter, and with poultry, which is always a luxury in the city, another great food staple is linked, for butter, eggs and chickens are ever in demand. North Dakota is a natural poultry yard, and there is not a grain farm in the state where sufficient chicken feed cannot be produced for a fine lot of poultry.

The raising of horses is another industry that is profitable where good animals are bred, and kept until they are fit for service. The most of the horse supply now to be seen in the western part of the state are young animals, two or three years old. A better grade of animals are being bred and the western broncho is disappearing. There is plenty of hay to be had this year. Enough hay will probably go to waste in the sloughs and the uplands of the state to winter all the livestock of the entire northwest. The hay crop is immense and there should be no scarcity next winter or spring.

NEW EQUITY MAN

Word has been received in the city that the American Society of Equity will send a new man here from Chicago to take charge of the work of organization in North Dakota. He is expected to arrive here in a few days, and will make his headquarters at Casselton, where the head offices of the society in this state are located. James Holes, a prominent farmer and an active member of the society, said this morning that the organization is in much better shape in every way than it has been for several years and good results are to be expected this fall. He said that a large number of the farmers of the state have pledged their wheat at \$1 and their flax at \$1.30 per bushel. Mr. Holes also stated that the market which the society is operating in Chicago is doing a good business and that the labor organizations are lending more assistance than ever before. One of the labor unions of Chicago has purchased \$500 worth of stock in the proposition

and it is evident that other unions will follow suit in this matter, and there is reason to believe that the society will secure what they desire—the cooperation of the labor organizations of the country.—Forum.

AGRICULTURE IN SCHOOLS

This topic is not new in the Granges of the country, for it has been discussed in various States, and the present public sentiment in favor of the proposition is quite largely due to Grange discussion and influence. The subject was discussed to some extent last year, and it may not be out of place to repeat some of the arguments made at that time. It has long been conceded by educational experts that mental development can be obtained as well thru the study of such matters as afford information to the student as thru the study of such matters as only afford mental discipline. Mental development will result from the study of plants and trees that one comes in contact with every day and the processes of nature by which the elements of the atmosphere and the elements of the soil are combined to produce those plants and trees, as well as from committing to memory the height of the principal peaks of the Rocky Mountains or the names of the rivers of Hindoostan. It is admitted that a boy or girl will be educated while studying the nature and composition of the rocks which are passed every day, or the names and habits of the birds that constantly fly

over their heads as by the study of the dead languages or the almost meaningless problems of higher mathematics. Life will seem broader and deeper and happier, whatever the occupation or profession followed, by reason of knowing something about the plants, trees, rocks, birds and soils with which one is constantly coming in contact than it would seem if ignorant of these matters, altho able to do some of the things once considered necessary for training the mind. This is an important function of nature studies and of the more intensive course known as principles of agriculture.

The greatest need at the present time seems to be securing the endorsement and support of those in charge of the educational affairs in the various States, including superintendents of schools and prominent instructors who have much influence in shaping legislation, if not directly responsible in securing it. We do not intend to convey the idea that the introduction of the principles of agriculture in the curriculum of public schools depends much upon legislation, for it does not, altho in many instances additional legislation would make it more effective. It depends mainly upon the interest manifested in the matter by those who direct the educational affairs, for in many instances they have all the authority necessary in this di-

Hundreds are using the Personal
on page 28.

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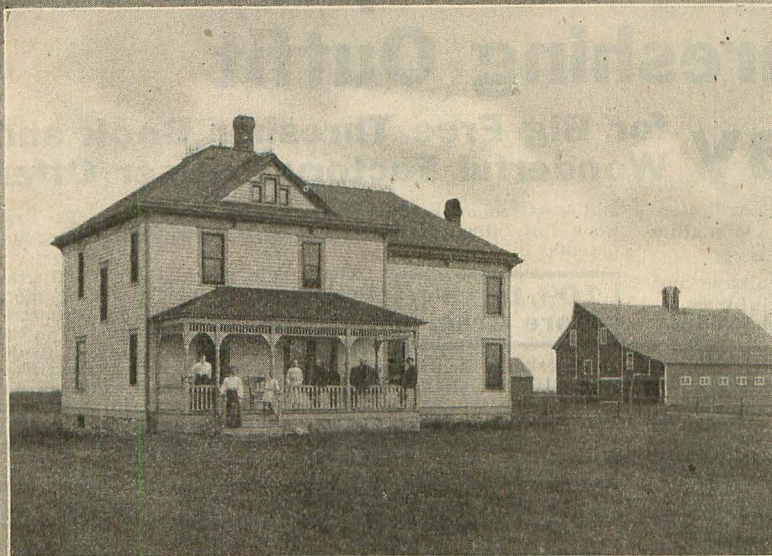
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rection. If this feature of education could be incorporated in the normal school training given teachers, the movement would be promoted in a very effective manner and the instruction begun at a very vital point.—National Grange.

COYOTE PROOF FENCE

Fencing the range to protect sheep from the attacks of predatory animals has met with excellent results in the Wallowa National Forest, Oregon. The problem was to find a strong fence that would make the sheep secure, even without the care of a herder.

The chosen fence, which is built of woven wire with barbed wire on the top, has kept out all the minor animals such as wild cats, lynxes and coyotes, but has not withstood the attacks of the grizzlies, which are apparently able to pass thru it with little trouble.

Sheep numbering 2,200 head were placed in the enclosure with their lambs upon June 20th and have been allowed to graze at their free will with no attention whatever from any herder. They have done splendidly and as far as the observation of those in charge of the experiment goes, a given area grazed by sheep under such conditions will carry

more sheep per acre than one grazed under the charge of a herder.

Tracks along the fence show that predatory animals come to the fence constantly and follow it around but, with the exception of the bears, do not seem able to enter.

The hunter employed by the Service for hunting predatory animals in the vicinity of this fenced enclosure has killed no less than six large grizzlies this season, besides numerous other animals of the predatory class.

The results of this experiment are so satisfactory thus far that private individuals are profiting by it. Mr. J. W. Emmons of Troy, Oregon, has a large area of private land fenced with a special wire fence in which he has this season lambed a herd of 670 ewes without a herder's care and with very little attention and great success. Mr. Emmons is extending his fence, for he finds that it pays.

Careful record will be kept of the weights of lambs raised inside this fence with a view of comparing them with the same grade of lambs raised outside the fence on the same class of range, so that any gains or losses in weight and growth may be determined.

DURUM WHEAT AND ITS FRIENDS

Letters Addressed to M. O. Hall, Member of Publicity Committee

Dear Sir:

In respect to our Durum wheat for Western North Dakota I would say, for me, it is the wheat, for its yield has been one-third or more than hard wheat, during the past three years.

In 1906 I sowed a small strip beside my hard wheat. Hard wheat rusted but the Durum did not and at threshing time its yield was twice as much.

Last year I do not think there was so marked a difference. I have also noticed this year, as I have been cutting, the Durum has developed the sixth row in many places. This I have failed to find in the other wheat which surely proves that it can withstand the drought.

With these three strong points in its favor what more could we ask?

Respectfully yours,

L. J. McCormick, Mohall, N. D.

Dear Sir:

I would say I had a fine crop of Durum wheat this year. Plowed the ground last October, seeded this spring about May 10 with a bushel and half per acre. Cut it Aug. 1st. It will stand more dry weather than any other wheat raised and is the kind we want to raise. I believe this is the wheat for the Northwest.

Respectfully,

E. E. Rhode, Mohall, N. D.

VELVET CHAFF WHEAT

I notice that last year the North Dakota Farmer stated that velvet chaff wheat did not produce as good a grade of flour or bread as the fife or blue stem. Is it not a fact that the blue stem wheat when first introduced into this country proved to be an inferior product from the millers' standpoint? At the present time we do not hear any complaint from the miller nor from the Minnesota State Board of Inspection with regard to the value of blue stem. For the past three years millers and the Minnesota Grain Board alike seem to have directed their attention to hammering down the price of durum wheats.

I see now that they have turned their attention upon velvet chaff, made a new class for it and given it a new grade. This is all very well providing the farmer receives proper treatment with all the others who handle or consume the product of the wheat. But will this be the

case? There is no question, but what at the elevators it will be bought as Velvet Chaff since the elevators know what the farmers are growing and when separated from other wheat they may be able to some degree to distinguish it. On the other hand, suppose the elevator receives two car loads of fife and blue stem that grades No. 2 Northern because it is just a little light in weight. They also receive one car load of Velvet Chaff that weighs 64 pounds to the bushel. Now supposing the elevator company or the terminals should decide to blend those wheats two car loads of fife and blue stem and one of velvet Chaff. What proportion of buyers would be able to distinguish with certainty the presence of the Velvet Chaff under these conditions? And is it not a fact because of the superior weight of Velvet Chaff the whole lot would grade No. 1 Northern. Would not the elevator profit to this extent? It looks to one who is after fair play for the farmers as tho here is another "woodchuck" and I would suggest

that some watch be made as to how much Velvet Chaff is shipped in at the terminals and how much is sold out as Velvet Chaff.

Mapleton, N. D. Fair Play.

See Our Big Offer on page 2.

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WE PAY DRAFTS.

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Save \$600 to \$1,000 on a Threshing Outfit

Write Today for Big Free Thresher Book and Wonderful Factory-to-User Offer

Threshermen everywhere are saving hundreds of dollars by taking advantage of our wonderful offer which is fully explained in the book.

This offer is so liberal, and makes it so easy to save and make money that even individual farmers are clubbing together and buying our Threshing Outfits for neighborhood use.

They are doing their own threshing when most convenient, and are making big money around home after their own threshing is done.

We can't tell you in this ad how liberal our offer is, but it is such a big opportunity that every Farmer, every Thresherman should get our Free Book and learn fully what it means to them whether they ever thought of owning a Threshing Outfit or not.

Please Remember This

We are not making this offer, (which saves \$600 to \$1,000 on every purchase) on something new or untried. Our Winneshiek Traction Engines and Separators are in use in every state in the Union where threshing is done, by the most successful threshermen in the United States. Experienced threshers know them and respect them.

The many patented features of both Engine and Separator make the Winneshiek outfits by far the simplest, most durable

and most economical that can be bought at *any price*. The Free Book fully illustrates all these labor-saving and grain-saving patents.

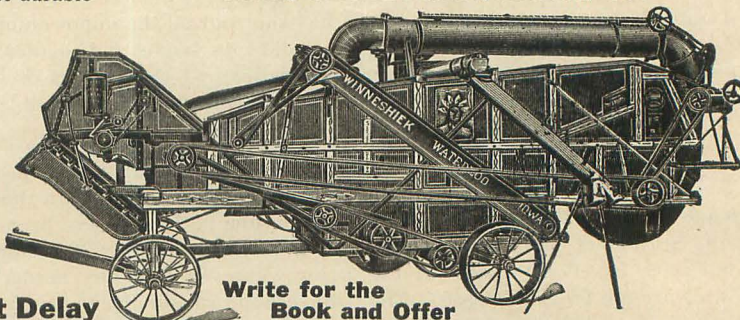
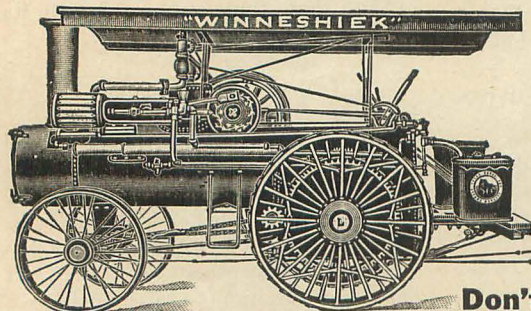
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IDAHO AGRONOMIST ON ALASKA WHEAT

Yield of Fields Already Harvested in That State Only 20 to 35 Bushels, Instead of Approximating Two Hundred.

The two plots of Alaskan and Egyptian seven headed wonder wheat, growing side by side on the state experiment farm here, were harvested on Wednesday. As soon as threshing is completed the yield will be announced. A complete milling test will follow and a bulletin will be issued by the station giving the result, so that the farmers of the west will have absolute evidence of the fact already established here, that the famed Alaska is nothing more than the Egyptian—a wheat without milling quality. An additional indication of the fact that the Alaska is not what its discoverer claims is found in a letter just received by Professor Olin from Professor R. E. Hyslop, agronomist of the Idaho experiment station, who states that the yield of the Alaska is only 20 to 35 bushels, in fields already harvested. The discoverer's claims run all the way from 100 to 222 bushels to the acre. Following is a copy of Professor Hyslop's letter:

"Would it be possible for you to send us a head of your Mummy or Egyptian wheat, as I understand you grew some against this so-called Alaska this year. Many people here are so skeptical that they have refused to take my word for the statement that this much advertised Alaska is Egyptian wheat. If I could obtain a head of the Egyptian wheat from you my statements would undoubtedly have greater weight. I hate to see the people so badly fooled so close to our station. Most of this wheat has been harvested. It has yielded from 20 to 35 bushels per acre. These fields which are not harvested, report has it, will go over 100. I should think the people would catch onto such exaggerated reports.

R. E. Hyslop, Agronomist."

LAST YEAR'S LUMBER CUT

Figures of the lumber cut in 1907 compiled by the Bureau of the Census and the Forest Service showed the largest total ever reported in the United States, exceeding by over seven per cent the cut reported for 1906, until then the record year. This does not necessarily show a larger actual cut than in 1906, for the returns obtained last year were more complete than ever before. The figures themselves disclose some interesting facts.

In 1907, 28,850 mills made returns, and their production was over 40 billion feet of lumber. This is believed to include 95 per cent of the actual cut. In 1906, 22,395 mills reported about 37½ billion feet. Since according to these figures nearly 29 per cent more mills reported last year than the year before, while the increase in production was only a little over seven per cent, it might be thought that the amount actually manufactured must have been greater in the earlier year. This, however, would be a too hasty inference, for it is almost wholly among mills of small individual output that the gain in the number of establishments reporting has been made.

A classification of the returns by states and regions throws additional light on the situation. Individual changes, as for example the remarkable rise of Texas from eighth to third place among the lumber-producing states, are doubtless accounted for primarily by the greater accuracy of the 1907 figures; but in the majority of cases the advances and declines can be traced to specific influences.

Before the year closed the general business depression was severely felt in the lumber industry. It was not, however, the most important cause of a falling off in the production of the year where a falling off occurred. For decline in production took place only in certain regions. The South is the region of greatest activity in lumber production, and yellow pine the most important wood, forming 33 per cent of the entire cut of the country. The cut of yellow pine reported shows an increase of 13 per cent over that of 1906. In the early part of the year many of the south-

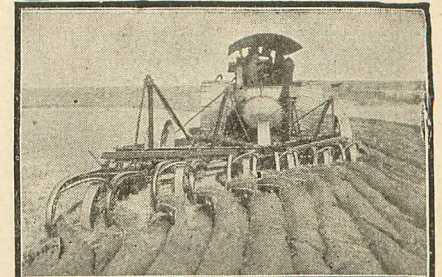
ern mills cut so heavily that the total was greater than ever before.

In the Lake States the falling off evidenced the waning supply of white pine. Michigan, which for many years

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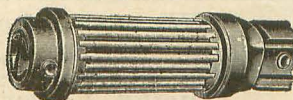
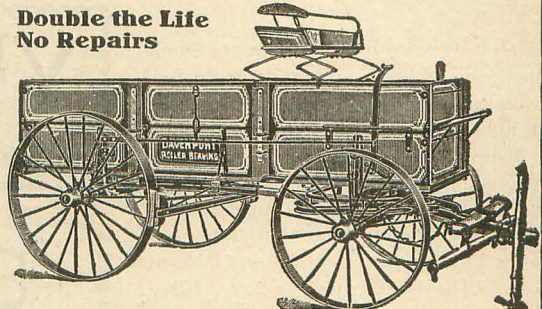
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led all the States in lumber production, and then gave way to Wisconsin, sank in 1907 from fourth to seventh place. While Wisconsin went from third to fifth. Minnesota as late as 1905 held fourth place. Last year it went from seventh to ninth. It was not until the latter 90's that the south displaced this group of states as the most important in all the Atlantic coast states from the Carolinas to Texas, the region as a whole will doubtless maintain its leading position for some years, in spite of the fact that at the present rate the bulk of the timber will be gone in another decade; but in totals of production by individual states the leadership has since 1905 been held by Washington.

The figures of production show that during 1907 Washington fell off very decidedly from its huge cut of 1906, while its sister state Oregon, is credited with a slight increase in its total. In the early part of the year Washington suffered from a car shortage, and at the end the combined effects of business disturbance and higher freight rates had brought the industry almost to paralysis. Oregon kept up its cut because of its larger proportion of coastwise and foreign trade. These two states together produced more lumber than any other two states in the Union.

It is a striking fact that the lumber prices have been steadily going up during the last half century, the per capita consumption of lumber has also been going up. In 1850, according to the best figures obtainable, the average consumption to each person in the country was 250 feet, in 1900, 460 feet, and in 1907, 480 feet. This illustrates what has been found true the world over—that with industrial progress the demand for wood becomes greater and greater.

NORTH DAKOTA FREE TRAVELING LIBRARIES

The state traveling libraries are small collections of books generally from forty-five to fifty in number which are sent out by the Public Library Commission at Bismarck to communities in which stations have been established. A library is kept six months and then returned to the Commission and exchanged for another and different lot of books. The books must be loaned free of charge to all responsible persons in the community. The libraries are made up of books for grown people and for children.

It is true that well selected traveling libraries result in much better reading on the part of the borrowers than in the ordinary city library where people may choose from a greater number of books. Here, in a small place, is a little group of

books which must be read, if at all, within the six month's time allowed, and the books become an important feature in the life of the town. It has been found desirable to keep the library in the most convenient public place—a post office, store, residence or school house. The books drawn from these libraries are read by many members of a family or household, so that the actual reading is two or three times as great as the recorded circulation.

The libraries now owned are those which were formerly sent out by the State Superintendent of Public Instruction to the County Superintendents and circulated by the latter among the different school districts. So many of the libraries have been in use for a number of years that it has been necessary to withdraw many of the older collections. During the last six months it has been the work of the Public Library Commission to reorganize as many of the better libraries as have been returned by the County Superintendents, some thirty in number, and to send them out again to communities that have applied for them. The community applying for a library is asked to secure the signatures on an application blank of at least six persons who are responsible residents and interested in getting the traveling library. They are asked to find a suitable location for the library where all the public will have access to the books, to appoint a librarian who will try to interest the people in the books, and to pay freight on the libraries both ways to and from Bismarck.

The present problem is to supply enough libraries for all the communities applying for them. It has been decided that with the limited number of good libraries now available they should be sent to communities least able to secure and maintain libraries for themselves and this would mean to communities under 500 in population. In

a state like North Dakota the traveling library is the solution of the book supply for a very large proportion of the people. There are not yet enough city or town libraries to supply the much desired books for the country people and the traveling library sent from a state center is the most economical and satisfactory method of supplying books for the smaller communities.

There are thirty-six towns in the state under 500 people. Each should be a station for traveling libraries. The greatest demand comes from the county districts and unincorporated places. It is probable there are at least 250 rural communities in the state which would be glad to have traveling libraries and would make excellent use of them. There are thirty-four towns having between 500 and 1000 people that ought to have traveling libraries with which they might try the library experiment and prove the value of a public library. The Commission's small appropriation of \$1500 a year does not begin to meet the

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general library demands made upon the Commission, provide for the legislative reference library required by the law creating the Commission, and leave anything for buying new traveling libraries which are so needed by the state at large. In some of the new library commissions the small funds for traveling libraries have been increased by private donations. In Oregon as soon as the Commission was established Mrs. Lee Hoffman of Portland gave \$500 for the first ten libraries; Mr. W. B. Ayer of Portland gave the Commission \$1,000 for books and four towns of the state paid 950 each, the cost of one library, thus contributing to the system in order to secure for their towns the benefit of the other libraries.

The blessings resulting from the traveling libraries are so great and the expense so small comparatively that the movement has won friends and sympathy in a wonderful manner. The individual, family and community life has been brightened and quickened by the wholesome and entertaining books that have found their way to homes in the isolated hamlets. Will not some North Dakota friend come forth and make a contribution to so worthy a cause? "It is after all, not the few great libraries but the thousand small, that do most for the people."

Persons who desire to establish systems of traveling libraries under control of the state and who wish further information regarding the subject are requested to correspond with the Public Library Commission at Bismarck.

IMPORTANCE OF DRAINAGE

Ridding Roads of Storm and Underground Water Subject of Thoughtful Paper Sent Out by the United States Office of Public Roads. Will Soon Issue a Bulletin on Concrete Drains.

With an average of 27,000 tons of water falling in the form of rain on each mile of public road in the United States annually, it is scarcely to be marveled at that the ten commandments of the road builder can be summed up succinctly in the word "drainage."

The saying has truth for a basis, as good drainage is the primary requisite for all roads. Even in sand roads this holds true, for there "good drainage" means such as will safely remove the storm water without erosion or gullyng and still retain the surface moisture.

To secure good drainage one must take into consideration both the surface water and the underground water. The surface water must be removed quickly and completely and without subjecting the road to excessive scour or erosion. For this reason, the center of the road

should be raised and the slope towards the side ditches should be from one-half to one inch to each foot distance, or so that the water will run freely to the side ditches and not flow down the road or remain in puddles on the roadway. The side ditches should be of ample size to care for the severest storms with a fall of not less than six inches to each one hundred feet. Frequent and ample cross drains should be constructed and every opportunity taken to get the water away from the road as quickly as possible. Any road along which you see water standing in the side ditches or on which puddles of water have collected or which has been badly gullied and eroded by the rains has poor drainage and is in need of immediate attention. In fact earth roads nearly always require a little attention after each rain. The split-log drag is essentially a tool to maintain good drainage on our earth roads, and should be used after each rain. On a heavy clay or gumbo soil the drag when properly used tends to puddle the road surface, keep it free from ruts, dense, smooth and hard, thus securing the best surface drainage possible.

But in many places the underground water is too near the surface and must be removed before a good road will be possible. This means that some form of sub-drainage must be resorted to, usually tile drains, of clay or concrete. Water from whatever source must be gotten rid of effectively, for water plus clay or gumbo invariably equals mud when mixed in spring and summer. Water becomes ice in winter and as water in freezing expands one-eighth its volume, the road heaves out of shape and when the ice melts the road disappears beneath the rising tide of mud constantly fed by rains, melting snows and underground springs.

In seepy and boggy places the sub-drainage in order to be fully effective should lower the water level to not less than three feet below the road surface. If tiles are used they should be carefully laid, true to grade. Most failures in tile drainage can be attributed to carelessness in laying, or too flat grade. Tile less than 4 inches in diameter should rarely be used, nor should a grade of less than 6 inches to the 100 feet be used un-

less absolutely necessary. In a very dense soil, it is always advisable to cover the tile to at least a depth of 6 to 12 inches with coarse sand or fine gravel. Care should always be taken to secure a free outlet for the drains and to protect the outlet with a concrete bulkhead or catchbasin, which can always be kept clean and the outlet free.

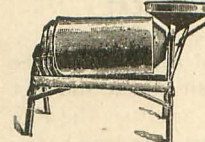
A bulletin is now in course of preparation by the United States Office of Public Roads telling how to make concreted rains. This bulletin will treat the subject fully, explaining carefully every point that may arise in making drain pipes and culverts.

Boys Interested in Corn Culture Contests Should Read Personal on Page 28.

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VELVET CHAFF WHEAT

Last year we called attention to the fact that Velvet Chaff wheat did not produce as good flour as either the Fife or Durum. It is reported to be a heavy yielder and it weighs from 60 to 64 pounds per bushel which of course is an advantage to the farmer. Experiments thus far this season show Velvet Chaff to be much better than last year, but yet it is considerably below our standard wheats for bread baking purposes. This wheat is sold under various names such as Johnson's, Dakota Climax, etc.

ALASKA WHEAT

During the past few weeks we have heard a good deal about the wonderful quality of the Alaska wheat. Some of the calculations made based on theory, not practice, have worked out some marvelous results. It has been claimed that the yield is 200 bushels per acre and the wheat is being sold to the farmers at \$20 per bushel for seed. Well worth it if the claim is true.

Investigation seems to indicate, however, that the famous Alaska wheat is without special merit. It is said to be the old miracle wheat. Parties who have visited Idaho, where the wheat, is grown, report that they did not see a farm that would yield 35 bushels per acre; in fact the common wheat grown in the neighborhood was yielding better than the famous Alaska wheat. The wheat is *soft and not* a good gluten strength. If we had to judge from the sample seen by the writer we should say that the

whole thing was a fake and advise North Dakota farmers to leave it well alone.

WINTER WHEAT

There is quite a growing sentiment in some parts of the state for trying winter wheat in North Dakota. In fact we have farmers in different parts of the state who have for the past 2 or 3 years been growing the wheat with good success so far as the yields is concerned. Perhaps a different story will be told, however, when we have an unfavorable winter unless farmers should do as has been suggested by one who has grown the wheat, sow a small quantity of barley in the fall with the wheat which will make a rapid growth and serve as an mulch and hold the snow in place.

Winter wheat, however, is quite different from our North Dakota wheats. They will not make the same grade of flour, it is much softer, contains less gluten and makes a much smaller loaf of bread. In growing winter wheat these facts should not be over-looked and North Dakota should strive to keep well to the front as a wheat growing state; and in the production of the wheat of such superior quality as to command a high price. We should be glad to hear the experiences of our readers with winter wheat.

BLEACHED FLOUR

One year ago, says Prof. Ladd, I spoke before this association on the subject of bleached flour. A year's additional experience has convinced me that this evil is one that should be considered by this association. It is an evil not confined to any one part of the country and, therefore, is of interest to the consumers in every part of the Union.

The process of flour bleaching carried on by the use of nitrogen peroxide is a chemical process and not any part of the milling process. It is not, as is claimed, an "aging process," but it is practiced for the purposes of deception and fraud; and the ingredient used to bring about the change is an active chemical that causes changes to take place in the oil; renders the flour and bread, made therefrom, less digestible and less nutritious; destroys its characteristic sweet and nutty flavor, so much sought for, until the bread produced from such flour at the present time is far from what it should be.

Bearing on this point the editor of the American Grocery recently said editorially:

"It is said that ninety per cent of the flour milled is bleached, or, as some designate it, "aged," by a chemical process. The excuse is that the people demand white bread. We doubt it. Consumers want sweet, nutty bread, of natural

color, and they fail to get it because the flour of today is lacking in flavor. We do not know why, but we do know that appetizing bread is scarce; that the art of home-made bread making is on the decline. Whether bleaching the flour, which naturally comes thru age, is in part responsible or not, we cannot say.

I trust that the members of our association may take steps at this meeting which will discountenance the further practice of the process of bleaching.

Mohall, N. D. Aug. 10th, 1908.

E. F. Ladd, Editor, N. D. Farmer.

Fargo, N. D.

Dear Sir:

The undersigned as secretary of the North Dakota Board of Grain Commissioners has addressed a communication to Senator P. J. McCumber which you may find will be of sufficient interest to your readers to print.

As the author of Senate Bill No. 382 known as the Federal Grain Inspection Bill, now pending before Congress, would like to get your views on some important points, to my notion, lacking in the bill in its present form.

Section 2 of the bill reads: "That said Secretary (meaning Secretary of Agriculture) shall also appoint, in accordance with the rules of Civil Service, at each of the following cities, to-wit: Portland, Maine; Boston; New York; Philadelphia; Baltimore; Chicago; Minneapolis; Duluth; Superior; Kansas City, Mo. St. Louis; New Orleans; Seattle; Tacoma, and San Francisco, and at such other important centers of interstate trade and commerce in grain as he may consider necessary or proper for the carrying out the provisions of this act, one chief grain inspector and such assistants as may be required to inspect and grade grains as herein provided."

Unless construction on "and such other important centers of interstate and commerce," can be construed to mean that the secretary is authorized and that he will appoint grain inspectors at local markets, where grain is offered in sufficient quantities to warrant, one being stationed, the bill if made a law, would be valueless, or practically so, to those whom you intend to benefit.

I fear the construction of "other important centers" would eliminate, probably every marketing place in North Dakota, and your labors, long and faithful as they have been, for the federal inspection bill would prove of no value to your constituency.

In order that full benefit accrue to the grain producers of North Dakota and others similarly situated thruout the Union, provision must be made that an inspector be located at each marketing place where half million or more bushels of grain is sold. This inspector should be an expert in his line, compe-

tent to weigh, grade and dock all grain offered, giving the seller a certificate, charging therefore, say ten cents, which fee would probably make the inspection department self-sustaining. Figuring 100 bushels to the load it would give the inspector at least \$500 which with other weighing, in many instances would amount to \$500 in fees, giving the local inspector fair salary for his services.

After the North Dakota farmer delivers his grain to the local elevator, his interest in the grain ceases. No federal or state law regulating docking, grading or inspecting, of any kind can be passed that will accrue to his benefit after he sells. In order to benefit him, he must be reached while he is the owner of the grain.

Very truly,
M. O. Hall

SELLING BLEACHED FLOUR

On a par with the practice indulged in by certain manufacturers of embalming the food products which they send into the market, says Commissioner Foust of Pennsylvania, is the conduct of some dealers in flour of bleaching inferior grades by the use of chemicals. This is done, of course, for the purpose of deceiving the purchaser. He is hoodwinked into paying a stiff price for a cheap product and in addition is probably injured in health by the chemicals used in the bleaching process. This is one of the most dastardly of practices, for the reason that it not only cheats the customer but exposes him to dangers which may ruin his health and shorten his life.

Various complaints concerning the quality of much of the flour sold in this state have come to the office of the Dairy and Food Commissioner. These have all been carefully noted and an effort will be made to determine just what proportion of the flour sold in this state has been artificially whitened and what proportion is being sold without such adulteration. This is a matter of vital importance to the whole people since there are few families who do not use large quantities of flour or bread in the course of a year. Bread has been well called the staff of life, but if the staff of life may be depended upon no longer we have indeed fallen upon perilous times. On account of the complaints made by consumers and with a view to begin the work of examining the quality of the flour sold in our chief city, Special Agent H. P. Cassidy, of Philadelphia, purchased various brands of flour on sale there. These samples have been carefully analyzed by Professor Charles H. LaWall, and it is quite likely that some prosecutions will be the result, the charge that chemicals have been used to whiten the flour having been confirmed in some instances. Indeed Agent Cassidy has terminated one case already,

the defendant offering no defense and promptly paying the fine of \$60 and costs. It is not likely this man will be caught selling bleached flour again.

There are at least two objections to the sale of chemically bleached flour. One is the deception practiced upon the public. It makes an inferior and cheap grade of flour resemble the better grades so closely that the fraud can be detected by analysis only, a branch of the world's work in which the average housekeeper has little practice. And it exposes the consumer to certain risks from the effects of the chemicals used that he would shun if aware of his danger. Thus it is contrary to law and those who sell such flour deserve punishment and are likely to receive it in due time if they persist in putting it upon the market. That severe punishment is deserved will probably be the verdict of every lover of wholesome bread in the Commonwealth.

CHANGES IN LIVESTOCK QUARANTINE REGULATIONS

The good headway being made by the Bureau of Animal industry, in cooperation with state authorities, in the eradication of scabies in sheep and cattle is shown by the proposed early release of considerable territory from quarantine.

The Department of Agriculture will soon issue an order (B. A. I. Order 152) releasing portions of North Dakota, Oklahoma, and Colorado from quarantine on account of scabies in cattle. The territory released is as follows: The counties of Williams, Ward, McLean, Wells, Eddy, Foster, Stutsman, Kidder, Burleigh, Emmons, Logan, and McIntosh in the State of North Dakota, a portion of what was formerly Woodward county of the Territory of Oklahoma, and the counties of Boulder, Jefferson, Denver, Douglas, Teller, Custer the remainder of Larimer and Fremont counties, a small portion of Arapahoe County, and those portions of El Paso, Pueblo, Huerfano, and Las Animas counties lying west of the Eighth Guide Meridian West, in the State of Colorado. There still remain in quarantine all or portions of Montana, North Dakota, South Dakota, Nebraska, Kansas, Wyoming, Colorado, Oklahoma, Texas, and New Mexico.

Amendment 2 to B. A. I. Order 146 will also soon be issued releasing from quarantine on account of sheep scab the states of Kansas and Nebraska, that portion of North Dakota lying north and east of the Missouri River, and that portion of South Dakota lying east of the Missouri River. The territory remaining in quarantine for sheep scab consists of the entire states of Washington, Oregon, Montana, California, Nevada, Utah, Colorado, and Texas, the territories of

Arizona and New Mexico, and parts of North Dakota and South Dakota.

Special orders will also be issued permitting, under certain conditions, the importation of Canadian cattle for exhibition at the Vermont State Fair, White River Junction, Vt., September 22 to 25, and of Canadian sheep for exhibition at the International Livestock Exposition, Chicago, November 28 to December 10, also for the shipment of cattle from above the Texas fever quarantine line for exhibition at the Georgia State Fair at Atlanta, October 8 to 24.

Copies of any of the regulations above referred to, giving particulars as to the matters covered, may be obtained on application to the Chief of the Bureau of Animal Industry, Washington, D. C.

ALASKA WHEAT

In the July issue of the North Dakota Farmer there was copied an article entitled "Wonderful New Wheat" as described by the Farmer's Tribune. The article was handed in by a subscriber during the absence of the editor from the state, and we regret that it found its way into the columns of the North Dakota Farmer, for there is no question but what the Alaska wheat is one of the biggest frauds practiced, if we are to judge of what has actually been found as compared with what has been claimed by its promoters. Those who have studied the condition in Idaho state that the yield will rarely exceed 35 bushels per acre, while the wheat generally in the state will go much better.

IMMUNE FLAX

Prof. H. L. Bolley of the department of botany at the agricultural college has just returned from an inspection tour of the plots of resistance flax which were planted at various places on diseased land over the state this last spring. The flax is a strain that has been developed at the college and is supposed to have the property of living and maturing on ground that is affected with the flax wilt.

The professor reports that the samples of the flax show marked resistance in some of the places where they were planted but under very adverse conditions the samples have not proven wholly resistant. In all cases the samples that have been tried on diseased ground have done far better than the ordinary flax and in some cases they will produce a full crop. The farmers over the state who have been watching the experiments are very much pleased with the results so far and the department is assured that the principle upon which it is working is evidently right. More of the flax will be given a trial next year.

Pure Food Department.

All Matters Pertaining to Foods will be Discussed in this Department

BAD EGGS AND POULTRY

To whom it may concern:

The attention of producers and dealers in eggs and poultry is called to the provisions of clause 8 of section 9 of the food laws as follows:

"If it consists wholly or in part of a diseased, decomposed, filthy or putrid animal or vegetable substance, or if such substance or substances be used in the preparation thereof, or if it is the product of a diseased animal, or one that has died otherwise than by slaughter." The same shall be deemed to be adulterated within the meaning of the law.

Parties violating the provisions of this law are liable to a fine of twenty-five to one hundred dollars and all necessary costs. By order of the court such products may be seized and destroyed.

All producers are warned not to offer eggs or poultry for sale which are not fresh and wholesome and all dealers, who buy or deal in stale or rotten eggs and decomposed or tainted poultry will be prosecuted to the full extent of the law.

From this time on dealers in the above mentioned articles of food will be prosecuted wherever evidence can be obtained.

(Signed) E. F. LADD, Com.

THE NECESSITY FOR PURE FOOD

"No citizen who believes in human responsibility, would want to go to his grave feeling that his greed had helped to shorten the lives of many of his fellow men."

We quote the Agricultural Department in the foregoing, to show how really serious this question is in the estimation of a body of experts, who are there, in part, to protect the public health.

And the point is worthy of careful note, because, as a rule, the average consumer of groceries pays little or no attention to the injury he might suffer from improperly prepared or adulterated food. That it is really a life and death question only a few admit in their own minds. But that it is such a question was the main cause of the Federal Pure Food Law being put into existence.

Consumers can greatly contribute toward the enforcement of the National and State laws on this head. Their own health necessitates that they scrutinize labels of food products, while demanding those only which are unquestionably pure.

No matter how good a thing looks, if it be adulterated or "preserved" common prudence warns the housekeeper away from it.

Most retail grocers prefer to sell good goods, and knowing that permanent trade is dependant upon good goods, they are anxious to sell things just as represented. It is money in their pockets to keep customers in good health and in a satisfied state of mind concerning all purchases.

So customers need feel no hesitation in making known to the grocer anything of an injurious character, as such information enables the grocer to know what to avoid when he buys from the wholesaler.

The grocer who makes a specialty of cleanliness soon attracts the best sort of customers. Nearly all of our city's grocers are as neat and clean in their stores as any in any part of the United States. Quaker habits of cleanliness have become a by-word all over the country, and this city in its markets and stores is, perhaps, the neatest to be found anywhere.

Our market retailers fully appreciate the appetizing effects of a cleanly display of foods and meats, etc. None in the whole country understand or practice it better. Our big markets have always been considered one of the great sights of the town, which visitors greatly enjoy even when making no purchases.

Then cleanliness has much to do with protecting goods from infection.

There was a time when the average citizen usually ate what was set before him, asking no question for politeness sake. But things are different now. Men want to know what they are putting into their stomachs. And the manufacturer who best satisfies them on this point has adopted a very large method of building up a good permanent trade.

The dairy and Food Division of our Agricultural Department states that there is a decided increase in interest in the discussion of food problems among the people of this state. People are noting how they can promote their own welfare, and secure the safety of their children by encouraging and supporting their servants who are charged with the duty of enforcing the pure food regulations of the state.

Nothing is more effectual in the enforcement of good laws than the knowledge that enlightened public sentiment is sustaining the officers who are charged with the execution of the acts of the As-

sembly. And nothing is more disastrous than the belief that the people are indifferent to law enforcement.

It is a singular thing, says the report, that the state contains some men who would rather do wrong than right.

If they are not breaking one law it is another which meets with their disfavor. "They seem to have been born crooked."

"They are either unable or unwilling to walk in the straight path of business honesty. And thus it happens that they are constantly devising schemes for eluding the law, for deceiving its agents and for deluding the people."

"Just at present a goodly number of these individuals are trying to make fortunes by selling counterfeit butter."

In such cases, the moral fibre in them is too weak to stand up when the paths of wrong-doing present allurements of that kind. "The desire to make much money in the shortest possible time, becomes a possession before which all regard for the health or the comfort of others falls."

For that reason law is an absolute necessity.

These latter points are given considerable prominence by the Department, as guides for the public to guard against.

Prof. E. F. Ladd, state pure food commissioner, has received special authority from the secretary of agriculture, giving him authority to prosecute any person, firm or corporation outside of North Dakota, and who sells food products or drugs in the state, not complying with the national or state laws, without taking the matter to the department of agriculture.

Your last chance to use Personal on page 28.

GROCERIES

Buy at wholesale and save money. Write today for free catalog 103. GRIGGS & CO., ST. PAUL.

HONEY Well ripened clover Honey for Sale, guaranteed absolutely pure and of the finest quality. One 30-lb. can 11 1/2c per lb.; 2 or more cans 11c; 12-lb. cans, in full cases of 72 lbs., 11 1/2c per lb. Send for price list. Address M. V. FACEY, Preston, Fillmore Co., Minn.

"GRANT'S

Candies are

PURE."

Pure Food Advertisers

The products advertised below are in compliance with the pure food law of North Dakota and of the highest grade.
ASK YOUR GROCER FOR THEM.

“BUY”

“EAT”

HOME BRAND

Pure Food Products


“ECONOMY” “SATISFACTION”

Griggs, Cooper & Co.

MANUFACTURING
WHOLESALE
GROCERS,

ST. PAUL, MINN.

Main Offices:
CORNER THIRD AND BROADWAY

DR. PRICE'S
JELLY

DESSERT
NUTRITIOUS-WHOLESOME

One package, 10 cents, makes one pint of wholesome Fruit Jelly. All flavors from true fruits.

“FOR THOSE WHO CARE.” **NOKOMIS CANNED GOODS**

ARE

Selected Fruits and Vegetables.

ABSOLUTELY PURE.

Packed with Greatest Care in Sanitary Cans.

Stone-Ordean-Wells Company,

WHOLESALE GROCERS.

DULUTH, MINN.

MINOT, N. D.

MONARCH BRAND



FOOD PRODUCTS

A GUARANTY OF PURITY. A WEL-

COME GUEST at every table where the HOUSEWIFE demands the BEST. THE MONARCH LABEL insures QUALITY in Coffee, Catsup, Pickles, Maple Syrup, Canned Goods or any article bearing the MONARCH BRAND of REID MURDOCH & CO., CHICAGO.

Libby's Food
Products

Canned Meats Pickles Olives
Preserves etc.

Libby, McNeill & Libby.

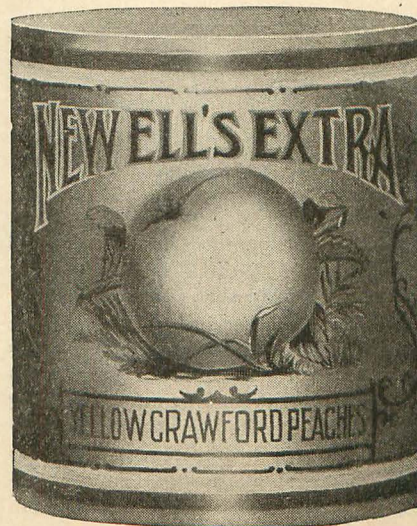
NEWELL'S EXTRA LINE

Represents the highest quality of food products that can possibly be obtained. Purity and quantity always stand foremost.

Geo. R. Newell & Co.,

WHOLESALE GROCERS,

MINNEAPOLIS, - - - MINN.



AMONG OUR ADVERTISERS.

LAST CHANCE

On October 1st we shall withdraw our special offer mentioned on page 28. It will be a long time before another such offer is made. Those who are interested in the cultivation of corn and who believe in the mission of this magazine should accept this offer at once.

CLEARANCE SALE

The Envilla Stock Farm is now advertising a clearance sale on a large scale. Many of our subscribers have patronized this concern, and we have failed to hear of one purchase not giving entire satisfaction. Mr. White is one of the most enthusiastic stock raisers in the state. He is foremost among the exhibitors at our state fairs and is deserving of most liberal patronage.

KALAMAZOO

From the pig iron to the finished stove is but a short step, but have you ever considered the large number of middlemen between the manufacturer and the purchaser of the stove? The Kalamazoo people are trying to make a short-cut for you. Will you accept their offer? It is up to you to give the Kalamazoo people a trial. Simply drop them a postal, asking for Catalog No. 195.

SHOW ME

When a reliable company like the National Lead Company is willing to furnish free the means of testing their products, you may be pretty sure the products will stand the test. In their advertisement they offer to send the blowpipe, with which the boys and girls at home may have much enjoyment after you have tested their paints. You should send for the blowpipe, whether or not you care to mention the N. D. F.

TELEPHONES

Every farm home should be supplied with a book on Rural Telephone Equipments, for the time is fast approaching when the telephone in the home will be as essential as any other necessity. This book is certainly worth far more than the little effort of sending for it. During the past five years the amount of telephone mileage has increased by leaps and bounds, and during the next five years it will astonish even the promoters of this boon to farm life.

JUMBO

This machine, like the famous elephant, is indeed great. It will certainly pay for itself in one season, if there is any large quantity of grain to be cleaned. On exhibition at our state fair it demonstrated clearly that it can effectually clean grain from every foreign seed. A catalog sent free upon application to the Minneapolis Separator Company will give a clear description as well as numerous enthusiastic testimonials.

MORALITY

On the cover page there is a little lesson on morality in business and the business value of morality. While at first thought there may seem to be no application of this teaching in the paint business, those who have made a study of that line of manufacture during the past few years are of the opinion that many a concern has been put to a severe test and found wanting. Some even have succumbed and no longer prey upon the credence of the public. Dealers as well as customers are beginning to rely upon standard goods manufactured on honor.

A FREE TRIAL

The Peoples Supply Company of Minneapolis, Minn., whose advertisement appears in this issue, have certainly made a new departure in selling stoves of all kinds direct to the user. They claim that their stoves are so improved and well made that they will save one-third of the fuel bill, and they also claim to sell at one-third less than you would pay the regular retail merchant, and to prove their claims they are willing to ship you one of their stoves on a 30 days free trial in your own home without you sending them one cent of your money until they satisfy you that what they claim is true.

Their catalogue is free and we would advise you to send for one, as a trial of their stove will cost you nothing if you are not entirely satisfied.

A PRIZE WINNER

D. E. Morlock, Morriston, Ont., writes Nov. 14, 1907, "Your letter at hand. I think ABSORBINE the best remedy I have ever used. Have a fine yearling carriage colt that got a Bog Spavin a few days before Guelph Show. I used ABSORBINE as directed from 4

to 6 times a day rubbing it in well and inside of a week you could not tell which leg was hurt. She carried the red ribbon at Guelph and at 4 other shows after the cure.

Whenever I hear of a neighbor having trouble with his stock I hand one of your pamphlets or advise him to get ABSORBINE and quite a number are now using it around here."

ABSORBINE penetrates to the seat of trouble promptly and effectually, without blistering or removing the hair. Does not require the horse to be laid up. Mild in its action but positive in its results. It will give you satisfaction. \$2.00 a bottle at druggist. Mfg. by W. F. Young, P. D. F., 233 Monmouth St. Springfield, Mass.

KEMP FACTORY AGAIN ACTIVE

At the George Huntington dairy farm on the Black Hawk road, says the Waterloo (Iowa) Courier, there is being tested out a manure spreader which appears to the Courier reporter as being just as far ahead of any manure spreader now in use, as are the present all steel twine binders ahead of the old wooden frame harvester.

This spreader is made under patent No. 818098, dated April 17, 1906, and issued to Joseph S. Kemp of Newark Bailey, N. Y., who is recognized everywhere as the "Father of all manure spreaders." In fact, Mr. Kemp regards it as the triumph of his life work, and there is no question but that he is entitled to the grateful thanks of the farmers of America for what he has done in producing a successful mechanical pulverizer and distributor of a fertilizer that now almost doubles the productive capacity of the soil, and which formerly went to utter waste. Emerson's epigram, "The man who makes two blades of grass grow where one grew before, is a public benefactor," can truly be accredited to Joseph S. Kemp, and he rightfully belongs in that galaxy of inventors including McCormick, Fulton, Whitney and Watt.

It is the purpose of the Kemp Manufacturing Company to sell the new "Triumph" spreaders direct to the dealers by mail. This will effect a big saving in advertising and expense for traveling salesmen, which, combined with the low factory cost, will enable the dealer to successfully meet the prices of any catalogue merchant or mail order factory selling direct to the consumer. It is this system of buying which the dealer must adopt in order to exist.

Of this new style machine the big plant in Westfield addition can turn out 50 machines per day as compared with 40 machines of the old style formerly turned out in both the eastern and western plants of the Kemp company.

Livestock Department

PROF. W. B. RICHARDS, Editor

NORTH DAKOTA LIVE STOCK BREEDERS' EXHIBIT AT THE MINNESOTA STATE FAIR

North Dakota was represented by three of our breeders at the Minnesota State Fair. W. W. Brown of Amenia was there with his herd of Short-horns, Frank Sanford of Rogers and Geo. A. McFarland, Valley City, each showed a herd of Aberdeen Angus. These exhibitors made a good showing at Hamline in competition with the best of their kind to be found in this country. The best herds of the United States are always found at the Minnesota State Fair. These breeders go from Minnesota to the South Dakota State Fair held at Huron.

HOG CHOLERA IN THE STATE

Hog cholera has broken out in the state and already has done a great deal of damage. Up to date it has done the most damage in some of the best pure bred herds of the state and those that were shown at the State Fair at Fargo. As soon as the swine exhibitors returned home from the fair their pigs began to get sick and it proved to be cholera. The infection must have been brought to the fair by a herd from outside of the state, for there was no cholera known to be present in the state before the opening of the fair.

Those who have investigated the source of the infection state that it was brought in by a herd shown from Minnesota. The belief is confirmed by the fact that this herd was only one of two herds shown at both Fargo and Grand Forks fairs and the disease has broken out among the hogs shown at both points.

This is a very unfortunate condition for those that are growing hogs in this state for if every precaution is not used to avoid infection of the herd the chances of the hogs becoming infected is apt to take place. The disease is extremely infectious and spreads from farm to farm very readily.

Below is given a copy of the instructions issued by the North Dakota Sanitary Board thru the State Veterinarian Dr. Crewe of Devils Lake, N. D.; that should be followed to protect against the infection. A copy of the law regulating the control of hog cholera in this state is also given.

Instructions

Hog Cholera and Swine Plague

These two diseases resemble each other, and as both are equally contagious, the

same measures must be used in prevention and control. When several hogs die within a short time, it may be safely assumed that the cause is due to either hog cholera or swine plague, or both diseases at the same time, and the following instructions should be closely followed:

Report the matter at once to the State Veterinarians.

Bury or burn at once all hogs which have died of any disease.

Confine the hogs to enclosures removed from the public highway.

Disinfect hog pens and enclosures by sprinkling with the following solution: carbolic acid, crude, 1 lb. to five gallons water, or air-slacked lime instead may be used daily.

Hogs should be kept in dry pens.

Dogs must be tied up as they carry the disease.

Wagons or hog racks used to remove dead hogs must not be taken on a neighbor's farm.

Only the one whose duty it is to feed the animals should be allowed near the pens, this attendant to keep away from neighbor's hogs.

As preventative measures when the disease exists in the neighborhood the following precautions should be observed:

Do not visit your neighbors' hog pens or enclosures, nor allow any unauthorized person to go into your own hog pens or enclosures.

Keep your dog tied up.

Do not allow your hogs to run, but keep them in small dry pens or enclosures.

Give hogs a small quantity of carbolic acid in the feed or water, 3 to 15 drops, according to age. This will keep the feeding troughs disinfected and will have a tendency to check the development of the germs.

In buying and selling hogs for breeding purposes they should be crated and expressed, as the law explicitly states that no hog may be taken from a stockyard except for immediate slaughter.

Breeding hogs shipped in from another point should be kept apart for at least two weeks, before being placed with other animals of its own kind.

If an outbreak of the disease has been experienced, no fresh hogs may be permitted to be brought into the infected premises until six months after the last hog thereon has died or recovered.

Do not think that your hogs are immune from either of these diseases, and every effort should be made to follow

out the above instructions, as they are for your benefit.

Intelligent prevention is much more satisfactory than treatment.

Regulation—1897

It shall be the duty of the owner, or of any other person having in charge any swine that have died of any disease, immediately upon the fact of such death by disease coming to his knowledge, to bury the same at least three (3) feet below the surface of the ground, or burn the same so that the carcass is consumed. No person shall sell, give away or order for sale any swine that have died of any disease or have been killed on account of any disease. No person shall convey upon or along any public highway, or other public ground, or any private land, except his own, any diseased swine, or swine that have died of or have been slaughtered on account of any disease. It shall be unlawful for any person negligently or wilfully to allow his hogs or those under his control afflicted with any disease to escape his control or run at large.

The instructions given above should be followed as closely as possible by every farmer in the state or any one else who may have occasion to be when it exists. If these instructions are followed the disease can be stamped out soon, otherwise it will take a long time. A little precaution may mean the saving of several thousand dollars to a single community. There is no other thing that has been such a draw back to the swine industry as cholera for it generally means the loss of the whole herd when it breaks out in the herd. Hogs that are very fat or have been fed feed of a high carbonaceous or fattening nature will contract the disease readily. Hogs that have not received the proper amount of nourishing feeds and are in an emaciated condition are very susceptible to contract the disease.

This is the first real dose of cholera that has ever existed in the state because it has been widely distributed as a result of the method on which it was brought into the state. It has broken out in certain communities in the state before but never so generally. For this reason it is very necessary that every one co-operate with the state veterinarian in order to get rid of it as soon as we can. Fortunately we have a State Livestock Sanitary Board at present, and a good quarantine law. If it was not for this it would be an occasion for considerable alarm for the welfare of the swine industry in this state.

SICK HORSES

Could you tell me what is the probable trouble with my horses? They have the scour very badly, so that they just give right out and I am not able

Northwestern Breeders' Directory.

HORSES

Robert Burgess & Thomas Lukyn, Fargo, N. D., Importers of Shire, Percheron and Belgian Stallions. The only Importers in North Dakota.

Percheron

J. W. & F. T. Peterson, Litchfield, Minn.
T. H. Canfield, Lake Park, Minn.
Stern Brothers, Fargo, N. D.
Crandal & Danforth, Randolph, Minn.
James Austin, Hannah, N. D.
Champlin Brothers, Clinton, Iowa
W. G. Clark, Gladstone, N. D.
Jesse Sullivan, Lisbon, N. D.
O. O. Ellison, (Sons) LaMoure, N. D.
White Bros., Valley City, N. D.
H. G. McMillan, Rock Rapids, Iowa.
A. H. Brett, Mason City, Iowa.
F. G. Wentworth, Lake City, Minn.
Donald Campbell, Hannaford, N. D.
J. A. Englund, Kenmare, N. D.
Alex. Galbraith & Son, Janesville, Wis.

Clydesdale

Isaac Marsh, Leal, N. D.
Donald Campbell, Hannaford, N. D.
McLay Brothers, Janesville, Wis.
John Hay, Hannah, N. D.
George Lang, Mapleton, Minn.
A. J. McInnes, Dazey, N. D.
W. T. McConnell, Hannah, N. D.
Alex. Galbraith & Son, Janesville, Wis.

Belgians

Dunham & Fletcher, Wayne, Ill.
Singmaster Brothers, Keota, Iowa.
J. Crouch & Sons, LaPayette, Ind.
Robert Burgess & Son, Wenona, Ill.
Oltmanns Brothers, Watseka, Ill.
J. W. & F. T. Peterson, Litchfield, Minn.
Barnes & Shaffer, Wahpeton, N. D.

CATTLE

Shorthorn

James Austin, Hannah, N. D.
W. W. Brown, Ameniam, N. D.
Winn Brothers, Redwood Falls, Minn.
Sanders Brothers, Farmington, Minn.
E. C. Butler, Cooperstown, N. D.
J. M. Crawford, Wahpeton, N. D.
F. W. Harding, Waukesha, Wis.
F. J. Dickerson, Medford, N. D.
James O'Hara, Lanesboro, Minn.
D. J. McLean, Cokato, Minn.
John Donnelly, Grafton, N. D.
N. P. Clarke, St. Cloud, Minn.
S. Fletcher, Matteson, N. D.
A. C. Gallup, Fairmount, N. D.
Frank Hammond, Bismarck, N. D.
S. G. Eliason, Montevideo, Minn.
Thomas Hecker, Carrington, N. D.
H. A. Nelson, Ray, N. D.
M. D. Kiser, Rogers, N. D.
Wm. Laplant, Jessie, N. D.
C. H. Ferrier, Dover, Minn.
Andrew Laughlin, Lisbon, N. D.
J. S. Anderson, Atwater, Minn.
D. W. McCanna, Cando, N. D.
Barnes & Shaffer, Wahpeton, N. D.

T. H. Canfield, Lake Park, Minn.
J. S. Peterson, Crete, N. D.
J. B. Powers, Power, N. D.
Luke Stannard, Taylor's Falls, Minn.
H. A. Strutz, Holmes, N. D.
W. J. Turnbull, Harwood, N. D.
Finlay McMartin, Claremont, Minn.
John B. Armstrong, Hannaford, N. D.
Hereford

J. H. Whitcher, Valley City, N. D.
Jeremiah Growley, Broncho, N. D.
Cargill & Price, LaCrosse, Wis.
R. W. Dickey, Ellendale, N. D.
H. F. Eaton, Oakes, N. D.
Massingham & Cosgrove, Harmon, N. D.
A. Edmunds, Caledonia, N. D.
A. J. McInnes, Dazey, N. D.
F. B. & H. W. Gannon, Ellendale, N. D.
R. A. Hasse, Tappen, N. D.
H. Jacobsen, Fingal, N. D.
H. J. Johnson, Oakes, N. D.
Movius Brothers, Lidgerwood, N. D.
J. C. Mills, Hannaford, N. D.
W. L. Richards, Dickinson, N. D.
Roach, Wold & Keck, Rutland, N. D.
Whitcher Brothers, Valley City, N. D.
E. O. Tade, Wheelock, N. D.

Aberdeen-Angus

R. A. Candor, Cogswell, N. D.
O. S. Chase, Mott, N. D.
G. W. Foogman, Grafton, N. D.
G. O. L. Lillie, Srgius, N. D.
Geo. A. McFarland, Valley City, N. D.
M. F. Merchant, Ellendale, N. D.
Frank Sanford, Valley City, N. D.
N. Upham, Grafton, N. D.
L. H. White, Cogswell, N. D.
Eastgate Brothers, Larimore, N. D.
J. W. Reedy, Beresford, S. D.
Barnes & Shaffer, Wahpeton, N. D.
L. A. Wood, Valley City, N. D.
C. M. Perry, Aldrich Ave., Minneapolis

Galloway

J. W. & F. T. Peterson, Litchfield, Minn.
G. J. F. Teal, Cooperstown, N. D.
W. C. Clark, Gladstone, N. D.
G. W. Dycon, Cooperstown, N. D.
Andrew Laughlin, Lisbon, N. D.

Red Polled

O. A. Austin, McVill, N. D.
J. H. Bacon, Grand Forks, N. D.
J. W. Martin, Gotham, Wis.
J. A. England, Kenmare, N. D.
C. G. Fait & Son, Monango, N. D.
J. W. Mitchell, Wheatland, N. D.
H. M. Tucker, Courtney, N. D.
C. A. Hall, Cooperstown, N. D.

D. S. Polled Durams.

F. S. Bunker, Kilbourn, Wis.
Isaac Marsh, Leal, N. D.

Jerseys

J. H. Bosard, Grand Forks, N. D.
J. A. Colby, Gardner, N. D.
Rev. S. Currie, Park River, N. D.
J. P. Ebersole, Upham, N. D.
Edgewood Stock Farm, Fargo, N. D.
M. N. Johnson, Petersburg, N. D.

SWINE

Poland China

C. F. Gummert, Renville, Minn.
Geo. H. Smith, Ameniam, N. D.
O. R. Aney, Wilmore, S. D.
W. W. Brown, Ameniam, N. D.
E. C. Butler, Cooperstown, N. D.
Winn Brothers, Redwood Falls, Minn.
John Donnelly, Grafton, N. D.
S. Fletcher, Matteson, N. D.
O. S. Jones & Co., Madison, S. D.
L. A. Knoke, Willow City, N. D.
Axel W. Peterson, White Rock, S. D.
A. S. Hawkes, Waseca, Minn.
E. H. Schutt, Fairmount, N. D.
E. J. Cowles, West Concord, Minn.
J. A. Englund, Kenmare, N. D.
J. L. South, Casselton, N. D.
C. E. Stowers, Wheatland, N. D.
Herbert Willard, Glyndon, Minn.
J. K. Campbell, Slayton, Minn.
John DeVaney, Waverly, Minn.
H. H. Bonniwell, Hutchinson, Minn.
C. E. Garmant, Bantry, N. D.

Berkshires

J. H. Bosard, Grand Forks, N. D.
W. S. Corsa, White Hall, Ill.
J. O. Hertsgaard, Kindred, N. D.
John Stafford, Crystal, N. D.

Yorkshires

T. H. Canfield, Lake Park, Minn.
Frank Willis, Marletta, Minn.
G. A. Forgerson, Rosemount, Minn.

Duroc-Jersey

W. E. Olive, Worthington, Minn.
Riverview Farm, Mandan, N. D.
L. L. Butler, Webster, S. D.
E. W. Smith, Buffalo, N. D.
J. E. Sparks, Jr., Armour, S. D.
L. H. White, Cogswell, N. D.
S. O. Mason, Red Wood Falls, Minn.
Andrew C. Nelson, Daily, N. D.

Chester White

James Austin, Hannah, N. D.
P. M. Burke, Crystal, N. D.
C. E. Budlong, Albert Lea, Minn.
C. A. Gallup, Fairmount, N. D.
A. E. Thompson, Hannah, N. D.
L. C. & V. A. Hodgson, Luverne, Minn.
James Fisher, Eastman, Wis.

SHEEP

Oxford Down

J. C. Mills, Preston, Minn.
Eastgate Brothers, Larimore, N. D.

Shropshire

C. E. Stowers, Wheatland, N. D.
Chandler Brothers, Kellerton, Iowa.
Geo. H. Smith, Ameniam, N. D.
Geo. McDerrow & Sons, Pewaukee, Wis.

POULTRY BREEDERS

White Plymouth Rocks

J. A. Englund, Kenmare, N. D.
Eastgate Brothers, Larimore, N. D.

to work them. The same condition prevailed last year at about the same time. I am feeding them six quarts of new oats and all the hay they want to eat.

Ross, N. D. J. M.

Answered by Dr. Van Es

While there are many causes of the condition which you describe, I would be inclined to question your water supply. If your water supply should contain an abnormal percentage of sodium sulphate or magnesium sulphate, it certainly would produce this condition. I suggest that you have your water supply analyzed, and I therefore beg to enclose directions in regard to the collection of the sample.

In regard to your horses I would give them three times a day on their feed a powder containing three drams of sub-nitrate of bismuth and one-half dram of powdered opium.

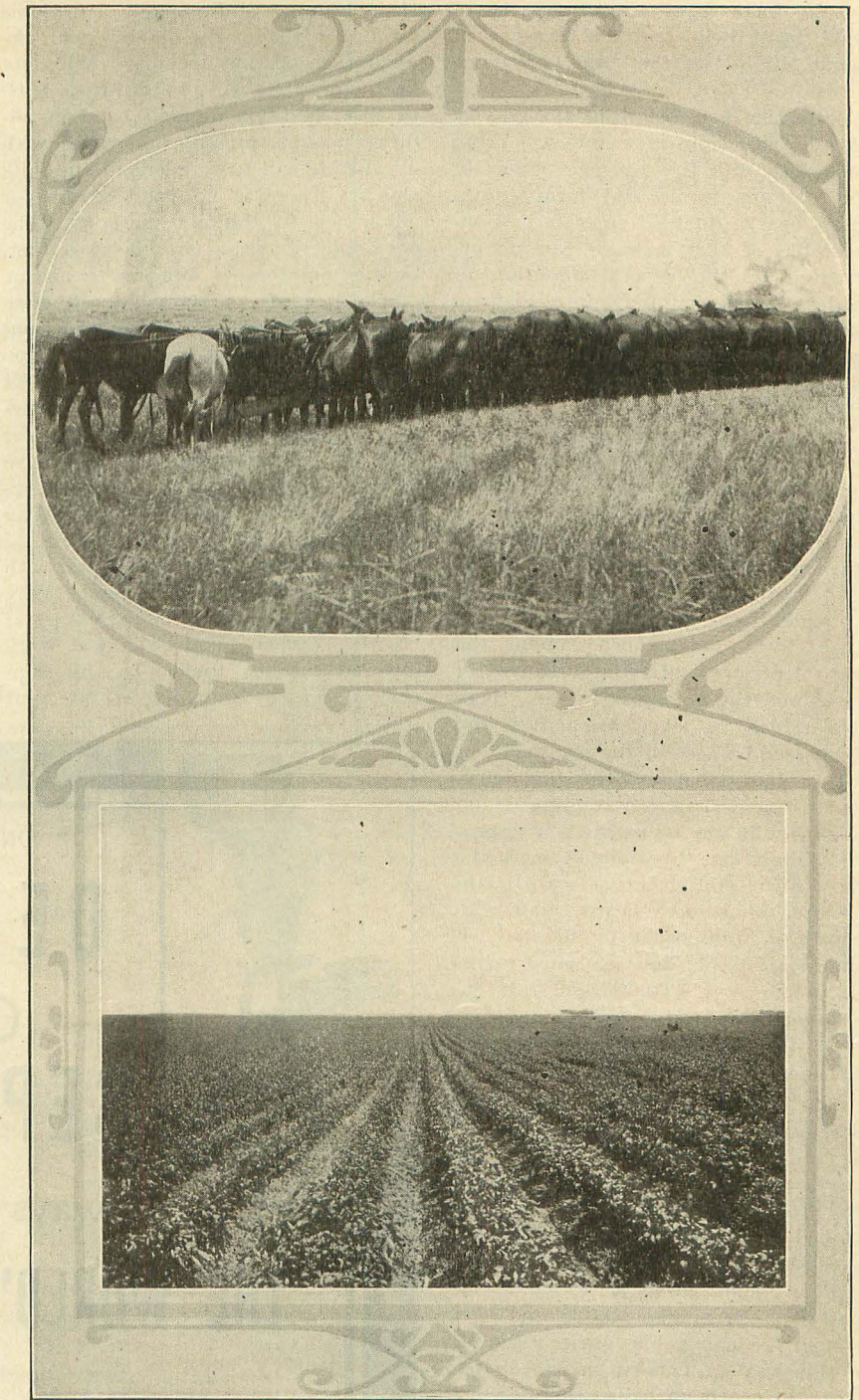
If you have reason to suspect your drinking water, it also will be well to select another source of supply.

FEEDING MILK TO COLTS

A Manitoba reader asks: "Would you advise me whether or not it is good policy to feed a colt cow's milk after it is weaned? It is two months and a half old now and eats well."

Any policy that will keep flesh on foals after they are weaned is a good one. Nothing so detracts from the value of a colt as to let him get down in flesh between weaning time and winter, and at no time is good feeding so well repaid. Cow's milk is not of the same composition as mare's, hence one needs to use care in feeding it. Put the foal on it gradually, using new milk at first diluted with about one-quarter its bulk of water. Cow's milk averages about four per cent fat, and mare's about three, and as it is generally the fat that causes indigestion its amount should not be large. A little lime water in the cow's milk will also help digestion. After the foal has been accustomed to new milk he can gradually be put on sweet skim milk. Every precaution should be taken to feed him out of a clean dish and to never give sour milk. Two or three quarts three times a day will be all that a healthy colt had better have.

Both before and after weaning, a foal should have a liberal supply of crushed oats and bran. If the colt is intended for road work this will give him muscle and stamina, and if of draft breeding will add size to these two essential features. Always make an effort to keep the milk flesh on a colt. Colts that keep it may be naturally easy feeders anyhow, but it always follows that they are the best keepers. Brown pastures, warm water, no shade, and flies to fight is a combination that will take the flesh off, and



The Noon Hour.

Correct Cultivation.

the spirit out of, almost any colt. On some farms these are difficult to overcome, but a shed, a well, and some grain will generally answer the purpose.—Farmer's Advocate.

FUTURE OF THE DAIRY FARM

What shall it be? Are the next twenty years to be a repetition of the past twenty years? This question is fraught with tremendous interest to millions of dairy men thruout our union. The issue is no longer confined to the eastern and middle states,

but it is as broad as the map of our country.

Changed conditions have brought this condition to the front. It is commanding greater attention now than ever before. Time was within the recollection of many when the matter was of vastly less importance; when land was cheap, help abundant, wages low and ready market for all farm products. We have today the ready market. The price for butter, milk and cheese has been most satisfactory for the past few years. On the other hand this advance in the price of milk products has been more than offset

by the increase of wages, scarcity of good farm help and an increase of about 100% in the price of dairy foods.

With the facts before us the gravity of the situation is manifest. From 1880 to 1890 the average value of the nation's farms and farm equipment nearly doubled in value. Considerable of this increase can be attributed to the general adoption of modern machinery and improved farm equipment. But aside from this there has been an immense advance in the value of farm lands, especially for the past five years.

It has come to pass in certain sections of the country that it is next to impossible for the land owner to secure competent and faithful help at any price. Just now we are undergoing a financial depression. Thousands of operatives are without employment. So acute is the situation that there is actual want and suffering among the army of unemployed. But fortunate for them, and the landlords as well, these men refuse to leave the cities and accept good wages in the country.

The question arises—can the dairyman meet the changed conditions and produce milk and its products at a profit? Surely not by the old methods. The days of slipshod, haphazard farming are numbered. Every man who ignores or is insensible to the changed conditions in his business must sooner or later fail. To succeed now he must produce dairy products at less cost. To accomplish this several things must occur.

First: He must get a larger net yield from his dairy. Instead of keeping the cow that makes only 2,500 quarts per year, he must keep those that produce not less than 5,000 quarts. Instead of paying high priced help to care for the stock and high priced feed to maintain 40 scrub cows, he must cut the number to 20 and this without reducing his gross receipts. In this way he can cut his feed and labor bill nearly in half. In this connection please note that it costs about \$30 to keep a cow for a year, even if she does not produce a quart of milk for the entire season. It will cost about fifty dollars to keep another cow that will produce \$150 per year.

In the past the dairyman has staked his all upon the milk checks. The cow's offspring has been practically valueless. The grade calves have gone for veal. If the owner raised them they would usually cost all they would bring in open market. This is the old way, but not the best. Why longer follow it?


There is a ready and growing market for registered Holstein cows and their offspring—cows that will pay for

their keeping and make a handsome profit for the owner. Why not take advantage of this opening? Why not keep cows that will produce from \$100 to \$150 in milk annually, and in addition to this present the owner with a valuable calf to supplement the milk check? There is no valid reason for adherence to the old methods. The only objections that are made are first, by the uninformed refusing to accept official records of thoroughbred cows as authentic; second, those who consider that thoroughbreds cost too much. These latter say "they can't afford it." Yet they can buy new buggies to drive to town in, pianos for their honies, phonographs, expensive furniture, etc., things that do not contribute a dollar to the income. Why then should these farmers refuse to replace unprofitable scrub cows with thoroughbred money makers? Why should they slave to support "star boarders" when good cows will work for and support them. In this connection I have compared a statement

showing the comparative earnings of a grade and a thoroughbred Holstein cow for one year.

The average production of grade cows per year is about \$40. The cost of keeping not less than \$30. Net balance of \$10 or less. In a great majority of cases it is less.

Segis Inka McKinley, No. 60411, born August 26, 1902, produced within a period of twelve months, over 8,000 quarts of milk. At 3 cents per quart it would give her a credit of \$240 for her milk. She dropped a heifer calf, sired by Aaggie Cornuco-



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pia Pauline Count, son of the four year old champion cow of the world. We would not sell this heifer calf for less than \$2,500. That gives Segis Inka McKinley a credit for the year of \$2,740. She consumed, all told, during the year, \$55. This left a net balance of \$2,685.

Now compare this with the results obtained by Prof. M. J. Frazer, of the Illinois Experiment station. He demonstrated by actual tests with 554 Illinois cows that 25 good cows returned to the farmer identically the same profit as 1021 poor cows. In other words, one good milking cow brought as much profit as 40 poor ones. This was confined to grades, taking the two extremes—best and poorest.

laborers in other vocations? I believe that if co-operative employment there would be less complaint of shiftless help, of indifference to the master's interests, of broken contracts, and of insubordination and recklessness.

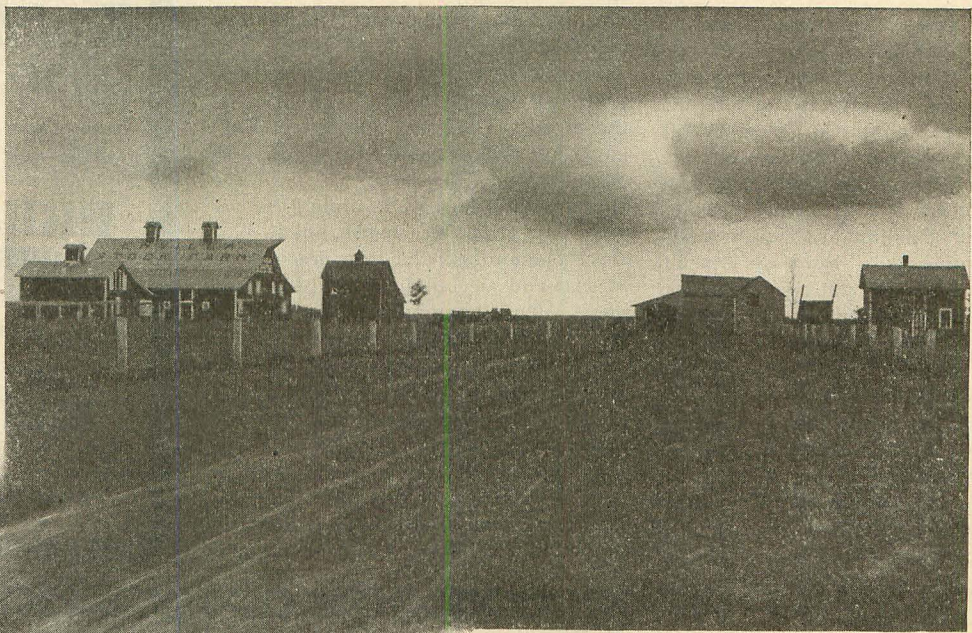
From a social standpoint co-operative employment would be a boon, and who would say from a business standpoint it would be any less successful? If every landlord could have his help take the same interest in his business as himself, it would result in increased income and increased savings, amounting to far more than the 10% net profits. I intend to give this last proposition a fair trial at Star Farms.

—Minnesota and Dakota Farmer.

provided that a comparison of such data with the office records shows no necessity for inquiry or correction of errors, failure to record transfer of ownership, etc. In short, the purity of the breeding is entirely a matter of honor, but the system of recording provides numerous safeguards which necessitates upon the part of the breeder a very careful keeping of his records.

The steps which a herd-book association may take to uplift the breed or the standard of breeding are apparently limited by practical considerations and it remains largely with the individual breeder to so select breed and develop his cattle as to secure the substantial improvement of the race.

The Holstein-Friesian Association devotes much attention to the distribu-



Scene of the Coming Sale at the Envilla Stock Farm.

This article is not written to boom any particular breed. The writer prefers registered Holsteins because he has found them most profitable; but let each individual select that breed which pleases him and is best adapted to his immediate environment. The point emphasized is to keep a registered stock only. Thus secure a double income each year.

I would advise before purchasing that the buyer get definite information, duly authenticated, as to the breeding and producing capacity of the animals deserving than those who work at the forge, or it is because farm laborers are less grateful than their brother

METHODS OF EFFECTING BREED AND HERD IMPROVEMENT AS USED BY THE HOLSTEIN-FRIESIAN ASSOCIATION

F. L. Houghton, before American Breeders Association, Washington, D. C.

Primarily the method of effecting breed and herd improvement by the Holstein-Friesian Association of America is outlined in its By-Laws and is summarized in the regulations and forms used for applications for registry and transfer.

This association, like all others, accepts without question the statements of breeders in regard to breeding data,

tion of literature relating to the breed, from which good comes and from which inspiration is derived toward the better handling and development of herds.

The feature of the work of this association from which the improvement of the breed is looked for, and from which substantial improvement may come, is in the system of Advanced Registry.

This system was inaugurated in 1885 and, under the rules then promulgated, was more or less used by breeders up to 1894, when by the adoption of various features the attempt to secure measurements of the animals entered, practically ceased and reliance upon performance alone was made the requisite for admission.

The original system of Advanced Registry provided for exact descriptions and measurements of the animals admitted and typical conformation was secured by the requirement that each animal should score 80 points of the adopted scale.

This system was originated by Mr. S. Hoxie, a man well qualified, by practical knowledge as well as by much study and observation, to outline and prescribe its rules.

In the preface of the second volume of this interesting record, issued March 1, 1889, Mr. Hoxie said:

"The objects of this register are to increase public interest in Holstein-Friesian cattle, to aid breeders in the work of improving them and to collect and preserve observations upon them from which principles relating to their selection and breeding may be deduced.

"The common system of pedigree registry originated upwards of eighty years ago. Since then it has been the most efficient means of awakening and sustaining public interest in the different breeds of purebred cattle. For several years sagacious observers have seen that the time was approaching when a step in advance of that system must be taken. The Holstein-Friesian Association leads off in this movement. Since the issue of its first volume steps have been taken for the establishment of similar registers for three other breeds. Whatever vicissitudes this movement may encounter, a strong assurance is felt that it is a necessity, and that it must eventually mark an era in the advancement and improvement of all breeds of purebred cattle."

Writing at an earlier period Mr. Hoxie said: "The information gathered in this work in regard to the structure and style of our noted cows must be of value to all who are interested in improving the breed. The means are here afforded of determining models, and of intelligently seeking such combinations of breeding as will produce our ideals in form and structure. The measurements have been taken with much care, and the descriptions have been made as correctly as fallible judgment and condensed language have permitted. Years will add special value to this part of the work. The time is coming when it will be regarded quite as important to trace peculiarities of structure and peculiarities of qualities in the lines of ancestry as to trace pedigrees. This work is also a slight offering to science. There is yet to be a science of cattle selection and cattle breeding. But such a science can never be established without a multitude of observations such as this work affords."

The exact details of this system would probably be of little interest at this time, but in a general way an excellent idea is conveyed by a quotation from the pamphlet issued by the Holstein-Friesian

Association of America, entitled, "Holstein-Friesian Cattle," as follows: "This Advanced Registry system is designed to advance the interests of every breeder. It affords the means of bringing the merits of every man's herd to the attention of his fellow breeders. It also serves to check false claims to merit—it demands full proof of all records received to its entries.

"Two opposite tendencies are manifest in the handling of every improved breed of cattle—one toward degeneration, the other toward further improvement; the former is brought about by illiberal feeding and unskilful selection and breeding; the latter by wiser management and better methods. This system is designed to specially encourage the work of improvement. It gathers the records of the great cows of the breed and proposes to gather descriptions and measurements of its most valuable bulls as well as cows. The value of these records must increase with time and the increasing popularity of the breed. The great breeders of England have always based their herd-books on selection. The same is true of the Holland breeders. No animal is received to their herd-books unless personally examined and measured by an expert and declared to be of special merit. This examination takes place after a cow is in milk, or a bull has produced offspring. Furthermore, public interest in a breed can only be maintained by constant selection—either by breeders personally or thru the methods of an association of breeders.

"The selection of bulls for Holstein-Friesian Advanced Registry is made in two ways. The first thru breeding and

structure. This requires that a bull to be eligible shall be the offspring of an advanced registry cow or the full brother of two such cows, or the half brother of four such cows. His superiority as a stockgetter must be shown by at least three of his get and he must be able to scale in the judgment of the examiner at least 80 points of the Scale of Points of the Association, and be capable of weighing at 5 years old, in good flesh, at least 1,800 pounds.



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"The other way is thru the official records of daughters. The Superintendent of this system is required to enter all bulls, living or dead, four or more daughters of which have made official records. This he must do whether application for entry is made or not. Such bulls are regarded as specially valuable, and a proposition has been made to name them 'Standard Bulls.'

"The selection of cows for this registry is largely based on records of milk and butter production. The rules fix minimum requirements for every day of age from 2 to 5 years. To accommodate different classes they provide two milk records, either of which will admit to entry, one for a continued period of 10 months; the other for two short periods of 10 days each, one of which must be made after eight months' milking. The rules also provide two other records, either of which will also admit to entry, one of butterfat, the other of butter made by the churn.

"If calving at 2 years old or under 2 years, the requirement of a cow is not less than 6,500 lbs. of milk in 10 months; or 354 lbs. and 118 lbs. in periods of 10 days each, the latter eight months from calving; of butterfat, 7.2 lbs. in a week; of butter by the churn, 9 lbs. in a week. If calving at just 3 years old the requirement is not less than 7,900 lbs. for the long milk record; or 432 lbs. and 144 lbs. for the short records; for the butterfat record 8.8 lbs.; for the butter record by the churn, 11 lbs. If calving at just 4 years old the requirement is not less than 9,300 lbs. for the long milk record, or 511 lbs. and 170 lbs. for the short records; for the butterfat record, 10.4 lbs.; for the butter record by the churn, 13 lbs. If calving at just 5 years old the requirement is not less than 10,700 lbs. for the long milk record, or 589 lbs. and 197 lbs. for the short records; for the butterfat record 12 lbs.; and for the butter record by the churn, 13 lbs. Every day of age from 2 years to 3, from 3 years to 4, and from 4 years to 5 increases these requirements as follows: That of the long milk record, 3.83 pounds; of the short milk records, the first .21 of a pound, the second, .07 of a pound; of the butterfat record, .00439 of a pound; and of the butter record by the churn, .00548 of a pound.

"Every such record must be attested under oath by all persons who are associated in making it. If description and measurements of the cow are entered with it, the inspector is required to certify, in case the record is not official, that, in his judgment, she is capable of its production. If a private record, and it reaches 18 pounds of butterfat, or 22½ pounds of butter, the Superintendent of this registry is required to proceed to further investigate it by a retest of 24 hours.

"The conditions of this class of official records are: (1) They must be made under the **personal, critical and official supervision of representatives of State Experiment Stations**; (2) they must be made by using the scales and the Babcock test, or other method approved by the Association of Agricultural Colleges and Experiment Stations; (3) they must invariably be for periods of not less than seven consecutive days; and (4) such a record must be confirmed by the affidavits of the owner of the cow, the milk-er of the cow and official supervisor of the test, vouched for by the officer of the State Experiment Station under whose direction the test was made and the record produced.

"Their value lies in the fact: (1) That they are unquestionably reliable; (2) they discover valuable strains of blood hitherto unknown; and (3) they lead to the employment of the richest and most productive strains to improve the dairy cattle of our country.

"Retests are sometimes made to confirm such records. The Superintendent of Advanced Registry is authorized to order such retests and to reject records that, in his judgment, fail of full confirmation. He may require the services of two representatives of the station in making a retest, that the cow may be kept constantly in view of one or the other of them for at least 24 hours or more during the retest.

WORK OF THE BUREAU OF ANIMAL INDUSTRY FOR THE CONTROL AND ERADICATION OF SCABIES OF SHEEP AND CATTLE IN THE WEST.

In a paper presented before the American Veterinary Medical Association at Philadelphia on September 10, Dr. R. A. Ramsay, Associate Chief of the Inspection Division of the Bureau of

Animal Industry, gave some interesting information concerning the Bureau's work for the control and eradication of scabies of sheep and cattle in the western states. To show the magnitude of this work Doctor Ramsay stated that during the fiscal year ending June 30, 1908, Bureau employees supervised 17,589,578 dippings of sheep and 1,523,290 dippings of cattle.

He explained the methods by which the Bureau works in cooperation with state authorities. This cooperation is necessary in order to do effective work, as the state officials are unable to control the interstate movement of livestock, while the Federal officials alone can not compel the dipping of animal, remaining within a state. The usual plan of the work with regard to sheep scab is for the Bureau to detail inspectors to a state to inspect all sheep by counties or districts, whether on the range or in feed lots. Reports are made as to their condition, whether free, ex-

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posed, or infected with scabies, and the names and addresses of owners are given. From this data an estimate is made of the per cent of infection and exposure to disease in the different counties in a state. When quite general infection is shown by the reports of inspection, the conditions are presented to the Governor or the live stock sanitary officials representing him, who are generally pleased to know just what the conditions are as the result of careful inspection.

The plan of having Bureau employees inspect cattle in feed lots, pastures, or on the open range at the time the spring round up is made is even more satisfactory than in the case of sheep. This work is done during the winter and spring when the disease is more easily discerned than during the summer. The advantage of a range inspection during the cooler months was very clearly demonstrated in a certain locality in Texas, where during 1907 an inspection of the cattle at the time of shipping and during the summer months showed only 5.04 per cent of infection, while a range inspection the same year showed 64 per cent of the herds infected. Whether this condition was altogether due to the mites not being active during hot weather, or whether the owners were active in selecting only the animals not showing the disease and presenting them for inspection at time of shipment, is a question; probably both had a bearing.

The great difficulty in eradicating cattle scab as compared with sheep scab, especially on the open range, is the fact

that not more than 60 per cent of the cattle on the range can be rounded up for dipping or any other purpose at one time, while sheep being horded in bands, practically all of them can be collected and brought to the dipping vats. This condition alone renders the cattle work much more tedious and doubtful than

sheep scab eradication. Another condition which renders the extermination of cattle scabies more difficult is the failure of cattle owners in the mild climates to realize that the disease will cause a loss by death. In cold climates losses from scab amounting to 20 to 40 per cent are quite common.

Poultry Department

By MRS. B. F. WILCOXON.

Diet has an important effect upon the fertility of the eggs.

Boiled oats makes a good laying food. Also other boiled grain.

Every fall I always sort over the potatoes keeping the small and inferior ones to be used in the winter's warm mash for the flock.

In order to have a hen lay 200 eggs in a year we must give her constant and diligent care. Aim high should be our motto in the poultry business as well as in other vocations of life.

Do not inbreed too closely as the eggs are not apt to show a high per cent of fertility. Do not try to get so many eggs during the breeding season, the fertility will be higher with less number.

The best breed is the one that we like best. One may be successful with one breed while another will be equally successful with some other breed. A great deal depends upon the man behind the feed pail.

The conditions and circumstances surrounding different persons make it impossible for any one to lay down fixed rules that will be a sure guide to your success in the poultry field. We must mix brains with our care for poultry.

In the winter time after the hens have gone to roost I arrange the litter (change it if necessary) scatter the grain into this so when the hens come off of the roost in the morning they can go to work for their breakfast.

In order to get a large number of eggs the hens must be from a egg producing flock. The strain must be back of the flock. It is possible by selection, careful breeding and scientific feeding to double the number of eggs which the hen will lay.

For instance, the leghorns are little egg machines, while some breeds are good sitters and mothers a leghorn hen

makes too flighty a mother, they are not as good a table fowls as some of the other breeds but for egg production they cannot be equaled.

There are thousands of poultry keepers in the United States no two of whom possess the same degree of skill. I have a way of my own. It may not come to what a great many of you have experienced. Nevertheless I get good results and that is what we are all after. You can study the different methods of feeding and adopt the one that you think is best. In the winter time I always feed a mash of cooked grains or vegetables. I feed all they will eat up clean in as short time. Never give them all they can eat, always keep them just a little hungry. In winter I always give them warm water to drink, and plenty of green food together with meat scraps. Observation teaches me whether I am feeding enough food to make my poultry a success or not.

MARKETING TURKEYS

The season for turkeys is not far distant. The tall, lanky gobbler with no flesh on its thin frame, is not what they want in the markets. It is seldom possible to get rid of him at any price. Well-fattened, female birds are wanted, and if the gobbler would compete with these, he must be well developed, indeed. There is much to look after in handling turkeys for market, as many otherwise good fowls are practically spoiled in dressing and shipping. In the first place, turkeys should be fat, and it will require not less than thirty days to put them in that condition. During the time of fattening turkeys must not be confined, but should be allowed their liberty in the fields. They should be fed morning and night all they will eat, and be careful that they have fresh water and grit. Whole corn, with an occasional mixture of other grain, will produce the best results. Do not wait until the last week and then try to rush them. It takes time to round out their bodies and give them a plump full breast.

One can pick out the money maker by the use of trap nests. We reduce the profit if we keep the hen that is never found in the trap nest.

Pullets are the best layers. Old hens bring the egg record down, of course there are exceptions. Old hens often make the best mothers. We should keep the exceptionally good old hens.

In feeding for egg production a valuable lesson may be learned from nature. If we notice fowls that receive the least care and attention laying most of their eggs in the spring time notice the conditions surrounding these fowls. Weather is warm, they have plenty of green food more or less grain, they wander here and there, getting an abundance of meat in the form of insects plenty of exercise and fresh air. Now, if we will try and have the same conditions in the winter we will get plenty of eggs. Have the houses as warm as possible without the use of artificial heat, of course fowls cannot wander over the fields covered with snow and ice, but we can have a small field in our hen-houses by having a deep litter, into which scatter grain. Make the fowls work for every bit of grain that they obtain. Have plenty of pure water and grit before them all of the time. I find an excellent remedy for many ills is to have a box of charcoal before them all of the time. Give them a variety of food, green stuff they should have plenty of.

Go into the hen house at night and you can soon find the bird that has taken cold. Take care of this bird. If neglected you will soon have a case of roup on hand. Roup is accompanied by an offensive odor. The digestive organs upon being deranged there follow diarrhoea. This is often caused by feeding sloppy food, cold, damp quarters. During the day and night I keep the poultry house windows open. At night I keep a cloth cover over the opening. I seldom ever have a fowl that has a cold. Roup is very contagious. In a mild form it can be cured by using kerosene, giving the birds a few drops of it. Sulphuric acid is a very good tonic, using a teaspoonful to one gallon of water. I would advise every poultry keeper to keep on hand a bottle of good roup medicine. I always sprinkle my houses with a solution of carbolic acid, about one pint of the acid to one gallon of water. I generally use the crude acid. Feed sick fowls soft food.

Breed is a great and an important factor in the improvement of a flock, but it is not everything. The best hen on earth must be fed and generally speaking the better bred she is, the more feed she will eat and profitably assimilate.

The kind of food given to a laying hen has much to do with her producing eggs but the method of giving it is of almost equal importance. A hen works and digs for her living during the warm weather, is in the prime of condition as the result of this exercise and variety of food which she gets. She will likewise come out in good condition in the spring and will be a profitable bird during the winter if fed a variety of food and in such a way as to induce exercise during the winter similar to that she gets during the warm season. But her winter house should be dry, warm, and sunny. The house should be warm that no water will freeze solid in it during the severest weather. A hen will lay very few eggs in a cold house. A great many people let their hens roost in any old place, throw them a small amount of corn. If they want water to drink they have to eat snow. Is it any wonder that they do not lay eggs. The importance of a warm house is not half appreciated. A lousy hen will not lay. By providing the hen with a dust bath she will rid herself of lice.

FEATHER EATING ANNOYANCE

A great source of annoyance in the poultry yard is the habit that birds sometimes acquire of plucking the feathers out of one another and eating them. Sometimes the cock bird may be seen holding his head down and standing quietly while the hens pluck the feathers from his head until it becomes bare and often streaming with blood, or, in other instances the hens will be noticed picking feathers from each other until they are almost naked. Whether the fowls are intended for the show pen, for the table purposes, or for egg production, feather eating is a most unpleasant practice to contend with. One bird will learn this from another, so that if it is allowed to go on, all the yard of fowls will speedily acquire it; cure is nearly hopeless when it has gone far. As a rule, feather eaters are oftener found in small, confined places than when the birds have a large grass run. Various reasons are given to account for this troublesome habit—overfeeding or a diet of too stimulating a nature; insufficiency of animal food; inadequate supply of sulphurous food; thirst, want of occupation—all these and many others are among the supposed causes.

Where the poultry in small yards have been fed with too stimulating a diet, the blood becomes overheated and irritation ensues, consequently the bird picks itself to secure relief, and the practice travels to the other fowls. Want of sulphur is a very usual cause of this bad habit, for sulphur enters largely into the composition of the feathers. When they have a free range, fowls ob-

tain a quantity of sulphur from weeds and other vegetable food, particularly from the seeds of plants, also from beetles and other insects, which they find in their wanderings; but poultry confined are debarred from this.

Another likely inducement to feather eating is want of occupation. When cooped up in close quarters the birds have little to do after they have had their meals. They sit huddled up close together and for amusement they peck at one another's plumage until they acquire a taste for feathers. As soon as this disease is noticed, the offender should be removed from the others and fed on a cooling diet, with a good allowance of green feed. When there is feather eating it is well to give the fowls some sulphur in their food about a teaspoonful in the soft feed to every three fowls, twice a week. Sulphur has a laxative effect on the skin and bowels so it should not be given in cold or wet weather. A plan to check this nuisance, which is sometimes adopted with satisfactory results is to place a daily supply of broken bones in the run. To give employment to the birds, some loose straw should be scattered on the ground and small grain thrown into this, which will induce them to search and scratch for the grain. If none of these suggested remedies are of any avail, it is better to kill the culprits, for to keep feather eating fowls is worse than useless.

On egg farms the profit is derived from eggs obtained in the fall and winter. In my experience in the egg business there has always been a shortage of eggs in the early fall and winter.

Hundreds are using the Personal on page 28.

October First

"Personal," our special offer on page 28 will be withdrawn. Think it over, then act now.

Don't Sell Your Eggs

When they are cheap pack them with my new method—will keep two years—will be as fresh as new laid eggs. No special place required to store them. Cost only 1/2c per dozen to pack them. Write me for circular.

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Ft. Des Moines, Ia. Box 50.

ROSE COMB WHITE LEGHORN EGGS
15 for \$1; 30 for \$1.50; 100 for \$4. Circular.
M. F. Horning, - - - Alden, Minn

Home Affairs

Katherine C. Neilson, Editor, Mayville, N. D.

Fruit Purees

Purees of fruit are in the nature of marmalades, but they are not cooked so long, and so retain more of the natural flavor of the fruit. This is a nice way to preserve small fruits which are to be used in cakes, puddings and frozen desserts.

Peaches and plums should have the skins and pits removed. Rub the fruit thru a puree sieve (a sieve made of strong wire) To each quart of the strained fruit add a pint of sugar. Pack in sterilized jars. Heat gradually after putting on the covers loosely by placing the jars in the boiler on a rack, put in cold water to come half way up the side of the jars, after heated let it boil thirty minutes, counting from the time the water begins to boil. Have some syrup ready boiling hot, as each jar is taken out fill up with hot syrup and seal at once.

Marmalades

These require great care while cooking because no moisture is added to the fruit and sugar. If the marmalade is made of berries, the fruit should be rubbed thru a sieve to remove seeds.

If large fruit is used, have it washed, pared, cored and quartered, measure fruit and sugar, allowing one pint of sugar to each quart of sugar.

Rinse the preserving kettle with cold water that there may be a slight coat of moisture on the surface, put alternate layers of fruit and sugar, having fruit first, heat slowly, stir frequently. Cook about two hours and seal in small jars. Cover with paraffin.

Coddle

To cook, to bake, to soften by heat.

Apples and pears make a rich fruit cooked in this old fashioned way. Wash and trim off the blossom end, leave on stems if desired.

Take fairly ripe apples, lay them in an earthen crock or granite pan. To one-half peck one big coffee cup of brown sugar and one pint of water, cover tightly and bake in the oven with moderate heat a long time, this gives a rich syrup and a rich color to the fruit.

Pears are delicious treated to a coddling. This fruit can be canned or sealed, pour over some of the hot dark syrup and seal at once. Do not pare the fruit.

Fruits Preserved in Grape Juice

Any kind of fruit can be preserved by this method. Particularly nice for apples, pears, and sweet plums. No sugar need be used in this process.

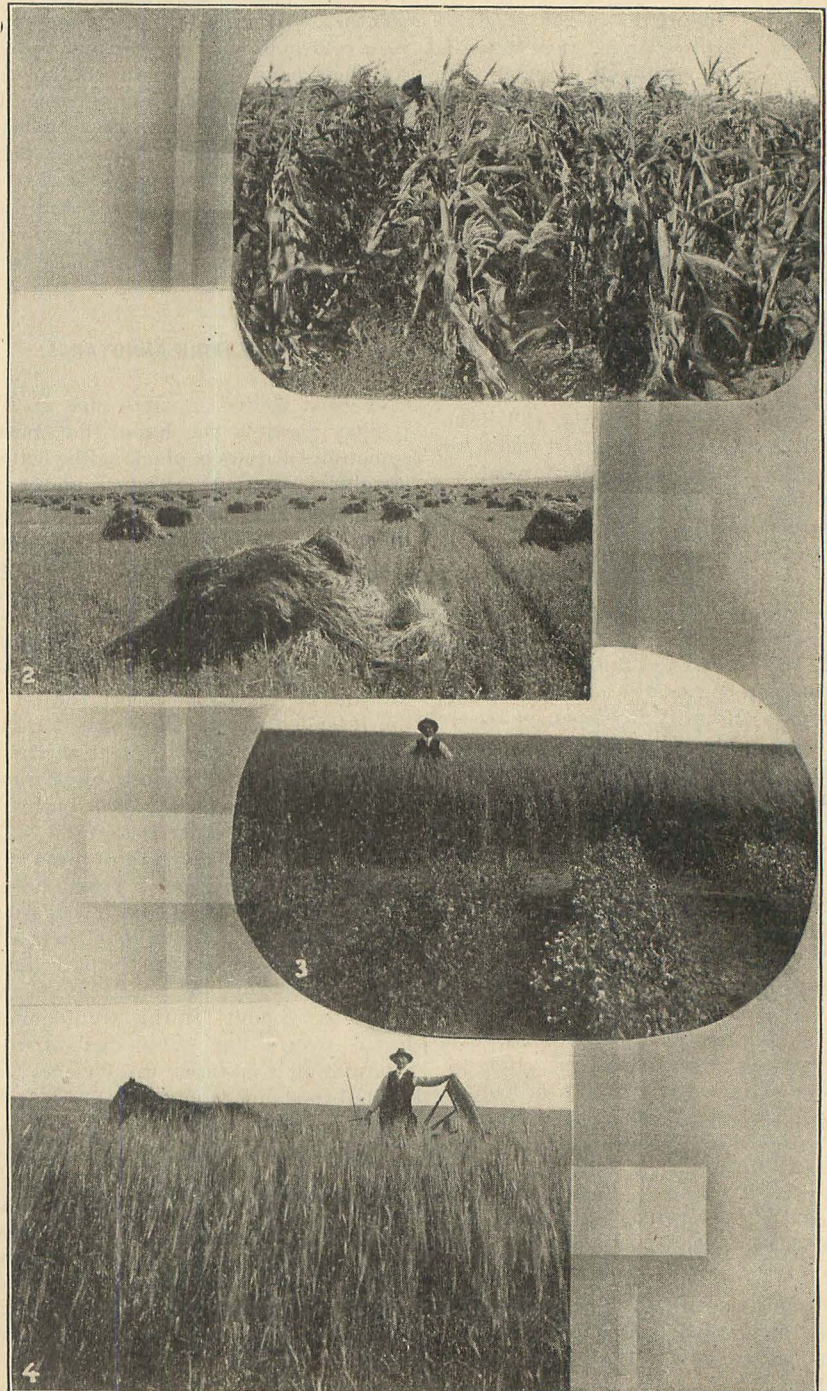
Boil six quarts of grape juice in an open preserving kettle until reduced to four quarts. Have the fruit washed, pared and quartered, if apples and pears. Put the fruit in the kettle and cover generously with the grape juice, boil gently until the fruit is clear and tender then can in jars.

Whole Tomatoes

Eight quarts of whole tomatoes, four quarts of sliced tomatoes.

Put the pared and sliced tomatoes into a stew pan and cook as for stewed tomatoes when they have boiled twenty minutes, rub thru a strainer, return to the fire.

While these are cooking pare the whole tomatoes and drop into sterilized jars. Pour into the jars enough of the stewed to fill all the space. Put the uncovered jars into the oven in a shallow pan of water with a cloth under the



Four Typical Scenes in North Dakota.

cans and let it cook for half an hour, moderately.

Take from the oven and fill full with hot strained tomato, then seal.

Canning fruit in the oven is to be preferred. It is easily and quickly done, and the fruit retains its shape and color better than when cooked in the kettle.

Large fruits require one pint of syrup to each quart of fruit; small fruits require a little more.

MUSHROOMS

Mushrooms, says the Walsh County Record, is a popular term loosely applied to many specimens of higher Fungi, or world's fair hotels, which grow up in a night with a bedroom on each stem. But the mushrooms we have in mind, and also had for dinner, is the third cousin of the toadstool. Great care should be taken in selecting mushrooms for the dining room table. Perhaps the surest test is to eat, say a peck of them; divide the peck up, if necessary; among four or five hearty eaters. Let them partake freely and ask for more. After partaking in this manner, seat the class on the steps or over grass and allow the fungi to fung for half or three-quarters of an hour. Should they collectively or individually be seized with shooting pains, or even darting pains, followed by an expression of chalk-like sadness, apply the stomach pump in person and call as many doctors as have telephones. The chances are that you have made a mistake in the selection, but you will know better another time. The common mushroom has pink gills when young, and is easily tamed in a common frying pan; add a little salt and interest; bid good bye to your friends, and eat hastily as there may not be enough to go around. It is found in old pastures early in the morning when the dew is on the ground, also the bay horse and the sheep. There are several thousand species, and when fresh they contain 88% of water, in this manner somewhat resembling gasoline.

SMARTIES

Young men let us give you the benefit of observation, says an exchange. We have noticed that at least nine tenths of the young men who have been before the courts for misdemeanors are those who prowl around the streets at night and take no interest whatever in education, seldom read a newspaper and are always ready to make fun of the other young men who use correct language and try to be somebody. It comes natural to them to discourage the studious and ambitious young men of their acquaintance. Their minds run towards dirty stories,

midnight sprees and bad company. This in a short time means trouble, a sheriff's invitation to attend court, and a fine or term in jail.—Magic City Democrat.

SCHOOL OF FORESTRY

The North Dakota School of Forestry, at Bottineau, N. D., has completed the first successful year of its life and with the increased appropriations and addition of land is fast growing into a powerful secondary educational institution. It has an able corps in its faculty and officers, and in drawing a large class of students. An institution that will encourage and develop horticulture and forest culture in this state should be supported by all.

Theodore Roosevelt has said: "A people without children would face a hopeless future; a country without trees is almost as hopeless."

When North Dakota became a state in 1889 constitutional provision was made for a State School of Forestry, to be located somewhere in the counties of McHenry, Ward, Rolette, and Bottineau, as determined by an election to be held for that purpose. Such election was held November 6, 1894, resulting in the location of the school at Bottineau. The legislative assembly of 1897, enacted a law naming the school the North Dakota School of Forestry; declaring it to be located at Bottineau by virtue of the vote taken thereon ac-

cording to law; and defining its object to be to give instruction in "such arts and sciences as shall hereafter be determined by the board of directors, and especially in the art and science of forest culture." In 1901 a tax was levied for the maintenance of the institution. The recent legislative assembly amended these acts declaring that the school should offer such instruction as is given in an agricultural high school, laying special stress on the encouragement of horticulture and forest culture.

The first building of the school was erected during the summer of 1906, funds for the same being subscribed by the citizens of Bottineau and vicinity. This building, a two-story frame structure, is located on grounds donated by citizens of Bottineau. The last legislature passed an act appropriating \$25,000 for erecting and equipping a new building and green house, both of which will be completed during the ensuing year. In the fall of 1906, the board of directors purchased an additional fifteen acres of land, making a total of thirty acres possessed by the school at present, to be used for experimental work in elementary agriculture, horticulture, and forest culture. Since January 7th, 1907, the school has had a total enrollment of ninety-four students. During the coming recess it is purposed to remove into the more commodious quarters being provided with the funds appropriated for that purpose.

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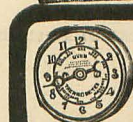
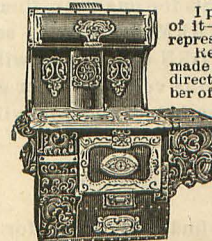
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at the last session of the legislature. Tuition is free to all students, residents of this state.

The courses offered are broad, including English, German, French, Civics, Political Science, History, Mathematics; special attention to sciences, physics, chemistry, geography, physical geography, geology, meteorology, zoology, entomology, and commercial courses, with bookkeeping, commercial arithmetic, law, short hand and type-writing.

However, as was intended by the legislatures, special work and courses are offered in the study of agriculture and forest culture, with practical experiments. They include:

Nature study which consists of text, field, laboratory work, and lectures. Study of local land forms and climate conditions, native animals and plants, and seed germination.

Botany—This course aims to give the student a general knowledge of plant life and also train his observation, judgment, and expression. The first two terms will be devoted to the study of the elements of the science, plant structure, plant physiology, and seed germination. The third term includes work in Cryptogamic Botany with special attention to fungi causing plant diseases, and the collection of an herbarium.

Elementary agriculture—A general course dealing with the fundamental principles underlying agricultural production. It includes a study of plants, animals, soil, field and forest plants, and farm management; an introductory course to the succeeding agricultural subjects.

Agronomy—In this course the cultivated crops, especially grains and grasses, are considered from the standpoint of their value; special requirements of soil fertility, and their relation to each other in systematic crop rotation. Special attention is given to the selecting, grading, and testing of seeds. The work is carried on by lectures, laboratory work, and observation on the school farm.

Elementary Horticulture—The scope of this course is to familiarize the students with the principles and methods of propagation, and developing cultivated varieties of plants. It includes plant propagation, planting, care and cultivation of the common trees and bush fruits, handling of fruit and plant breeding.

Vegetable Gardening—Instruction will be given in the methods of growing the vegetables in the field and under glass. Emphasis will be laid on greenhouse construction and management.

Landscape Gardening—Course includes principles of the art, a study of ornamental plants and planting,

and mapping of lawns, grounds, etc.

Forestry—Work adapted to the needs of North Dakota. Study of the beneficial effects of forests, comparison of hardiness, habits and value of different species, methods of propagation and care of young trees. Special attention is given to the planting and care of shelter belts and wood lots.

The Bottineau School of Forestry is still in its infancy but under the presidency of J. D. Kemp, it is doing the work intended by the state legislators, and becoming a leading agricultural high school.

CONSERVING OUR NATIONAL RESOURCES

The first returns to the National Conservation Commission show that Uncle Sam is making fine headway with his inventory of natural resources. It is perhaps a bigger job than he at first suspected but indications are that he is going to get thru it in good time. Very likely it has cut short the vacation plans of some of his best helpers, but there has been no complaint. His corps of investigators, statisticians, experts and scientists have buckled down closely to the work all summer.

Inquiries have been going out from this and that government office by the thousand. They have gone to special agents in the field, to the government stations here and there, to bureaus of statistics all over the country, to county clerks, to township assessors, to manufacturers, to lumber dealers, to railroad

and steamboat companies, and to farmers. The chiefs of the government bureaus have been wanting to know about lands—farm lands, timber lands, mineral lands, about crops and crop production; about swamp and overflow lands; about irrigation; about navigation—how far the use of our inland waterways has decreased and the reason for the decrease; the cost of water traffic as compared with railroad rates; the use of water power and its possibilities; about all phases of the forests and of timber and lumber; about how much of minerals we have left and the probable duration of the mineral supply, and about livestock and game and fish.

This is only the most hurried kind of general sum-up of the "Schedule of Inquiries" of the National Conservation Commission. Just what it really is can be seen only by studying a copy of this most unusual document, the "Schedule," on which Uncle Sam is basing the first inventory he ever attempted to make of his natural wealth. It can be obtained by writing a letter to Thomas R. Shipp, Secretary of the National Conservation Commission, Forest Service, Washington, D. C. The Conservation Commission also gets out "Bulletins of Progress" which show just how rapidly the Conservation movement, started at the White House Conference of Governors, is going forward. These also may be obtained from the Secretary.

Since the Governors and the great national organizations have shown so great an interest in the conservation of

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resources the movement has spread all over the United States. New state conservation commissions are reported to the National Conservation Commission at the rate of three or four a week and large national organizations are rapidly coming forward with conservation committees of their own. The conservation movement may be said now to be firmly established. All the government bureaus are rapidly pushing work on the inventory of resources in order that a preliminary report may be made to the National Conservation Commission at its meeting in Washington, Tuesday, December 1. One week later, Tuesday, December 8, the Governors of the states and territories, or their representatives, will meet in Washington with the commission. Already, altho the invitation has not yet been issued, the Governors of some twelve or fifteen states and territories have announced their intention to be present at the meeting. Among these are Governor Frear, of Hawaii, and Governor Hoggatt, of Alaska.

That the conservation movement is absolutely nonpartisan is shown in the vigorous declarations in the platforms of both leading political parties in favor of conservation of natural resources. Mr. Bryan, who spoke at the Governors' Conference, has declared himself strongly in favor of conservation and Mr. Taft, in his speech of acceptance, went on record as an advocate of the movement. It is a question on which the American Federation of Labor and the National Association of Manufacturers agree. Justices of the Supreme Court of the United States have written President Roosevelt expressing unqualified approval of the movement to save the Nation's natural wealth, and Cardinal Gibbons, just before leaving to be present at the Pope's Jubilee in Rome, gave out a strong statement as to the duty involved in making provision for future generations by taking care of the resources of the country.

The work of compiling the great mass of material resulting from the inquiries sent out by the different Government Bureaus will undoubtedly be one of great responsibility and one requiring expert knowledge and peculiar ability. For this task President Roosevelt has selected Mr. Henry Gannett, of Washington, D. C., Assistant Director of the Cuban Census. Mr. Gannett, who is one of the best known men in the government work at Washington, is just now finishing the compilation of the census of Cuba. At the conclusion of that, by direction of the President, he will devote all of his time to the compilation of the material which, when completed, will make up the first inventory of natural resources ever attempted in the United States.

HOW THE PEOPLE CAN RULE

The question has been asked, "Shall the people rule?" It was the intention of the founders of this government that the people should rule. Unfortunately, however, the people do not rule and will not rule until there is a radical change, irrespective of what political party is in power. There is but one way for the people to rule and that is to prevent the employe or representative of any public service corporation holding public office. The officers and attorneys of the railroads, express or telegraph or telephone companies should not be tolerated an instant in our national congress, in our state legislatures or in our city councils. No matter how honest they may think they are, the public distrusts them. They cannot, while drawing munificent salaries from the public service corporations, be expected to at the same time pass laws curbing their employers in the interest of the common people. They will naturally vote for and assist the employer who pays the most. It is only natural they should do so.

In those states in which there are no great cities, where the agricultural vote greatly predominates, the laws are more apt to be good. In the legislatures of these states there are always to be found men who have the interest of the masses at heart. Unfortunately, tho, much good legislation demanded by the common people is killed or thwarted in the senate, the upper branch of nearly every state in the union having a majority on the pay rolls of public service corporations.

Much of what has been branded as "freak legislation" in the agricultural states has turned out to be the very best of legislation because it was begotten in honesty for the benefit of the whole people. Take the Texas stock and bond law, for instance. This law provides that when a railroad is built it shall be bonded for no more than the actual cost. This is determined by the engineer employed by the state railroad commission. Any investor can ascertain what it cost to build any road and what its stock is worth. This was denounced as "freak legislation," yet today its staunchest defenders are those who fought it most violently. Texas has another law which regulates the issuance of bonds by municipalities and counties. A city or county can only issue a certain amount of bonds based upon assessed valuation, and provision must be made for sinking fund and interest payments. Besides, the validity of these bonds must first be passed upon by the attorney general and state comptroller. The result is the bonds are a sure and safe investment without the slightest danger of any default. This law was made by the farmers. According to the report of the

comptroller of the state of Texas, just made public, the tax values of the state amount to \$2,250,000,000, the increase over last assessment being the enormous sum of \$615,000,000. Because of this increase the ad valorem tax rate is to be reduced from 12½ cents on the \$100 to 6¼ cents, and the school tax rate from 20 to 16 2-3 cents, with a per capita school allowance of \$6.25 for each child of scholastic age.

All this is due to so-called "freak legislation," enacted in a great agricultural state. The last legislature passed a bill requiring all property to be listed at its full value. In anticipation of an increase in assessed values the tax rate was made automatic. The higher the values the lower the rate. The public service corporations are required to bear their share of the tax burden under special laws. The corporation representatives fought these laws bitterly, but the people demanded them and, much against the grain, the law-makers had to vote for them. Such laws, however, could not be passed in a state which is controlled by one or more large cities. It is the voice of the people.

Agriculturists do not demand special legislation. They have no bosses to serve—no men higher up who employ them to go to the United States senate, congress, state legislatures or city councils. No, the people shall not rule until they forbid public servants representing public service corporations in any capacity.—Journal of Agriculture.

SAWDUST AND VENEERS

Five hundred manufacturers of explosives, pulp wood and similar products, have been asked by the National Conservation Commission for information as to all possible uses of sawdust. From this it will be seen the Commission is going into fine details in its inventory of the natural resources of the country. Seven thousand lumbermen have been asked for their opinion as to the waste of lumber in saw mills, and more than two thousand lumber dealers and cooperage, veneer, furniture, box, vehicle and implement manufacturers have been asked to point out striking features of waste in their respective lines. Yet all this is only one part of the general scheme of hunting down waste which the Commission is following in making its inventory. It is going after the little wastes here and there, which, added together, and put into dollars and cents, make an astonishing total.

For instance, take the making of veneer. At first blush it may not seem worthy of consideration with the manufacture of other products mentioned. Yet, the scarcity of the *more attractive* finishing woods in the last few years has led to the annual production of over

1,100,000,000 feet of veneer. This, of course, has been made possible only by the introduction of new veneer making machinery.

The use of veneer is generally regarded as exemplifying the scarcity of the finer woods and typifying the complete utilization of various kinds of woods, yet, from one of the schedules of the National Conservation Commission it is evident that the Commission expects to discover great waste even in veneer manufacture.

Tho the word veneer carries many meanings, from a glaze applied to pottery to the "polish" of a man of the world, it is most commonly employed as the name for the thin slices of wood now extensively used in the manufacture of all sorts of articles of use, such as wood plates, baskets, and the exterior finish of furniture and wood work. The manufacture of veneer in the last few years has advanced by leaps and bounds.

The best veneer is sawed, but a great deal is sliced and still more is "rotary cut." By the last named process logs of the desired wood are steamed until they are soft and then fixed in a lathe-like machine, in which they are turned against a wood knife. As the log rotates against the knife, veneer of the desired thickness is peeled off in a continuous slice, as if you should pare an apple, going deeper and deeper at each complete turn, until nothing is left but the core. The center of the log left after the veneer is cut is also called a "core."

The woods principally used for making veneer are red gum, maple, and yellow poplar, which together yield more than half of the total product. Red gum is largely used for baskets and maple for furniture. More valuable than these, however, are white oak and walnut veneer. Beech, which can be cut very thin, is used very largely for wooden plates. A number of other kinds of woods are used.

A good deal of waste occurs in the manufacture of veneer. It is always a problem, for instance, what use to make of the cores left by the rotary process. In many cases these are used for pulp wood, pillars, or panel headings, and they are largely used also for fuel, excelsior, crates, boxes and baskets.

In the schedule of inquiries which the National Conservation Commission, thru the Forest Service, is sending out, several questions are aimed to secure information as to the amount of waste in veneer manufacture and the possibilities of finding ways to utilize it.

FARMERS' NATIONAL CONGRESS

Hon. William J. Bryan to be One of the Speakers

Arrangements for the 28th annual

session of the Farmers' National Congress, which opens Sept. 24, at Madison, Wis., are now practically completed. The program is exceptionally strong and attractive. Some of the leading agricultural specialists of the nation will take a prominent part. One of the country's strongest agricultural colleges is located at Madison, and the delegates will have an opportunity to inspect thoroly its workings, as well as to meet and hear many men who have been important factors in the position which American agriculture holds today. The seeing and hearing such men is an inspiration, and a great influence in raising enthusiasm for and loyalty to agriculture. In addition valuable addresses will be delivered by the governors of

Wisconsin, Minnesota, Iowa and North Carolina. Other distinguished gentlemen on the program will have important messages to the farmers of the Congress, but the greatest attraction of all and the big feature of the congress will be an address by Hon. William J. Bryan on the farmer and his relations to public affairs. Mr. Bryan's prominence before the country and his ability, will give especial interest to this address. A large attendance from many states is anticipated, as long lists of delegates have already been received by the secretary. It is hoped that every state in the Union will be liberally represented. George M. Whitaker, secretary, 1404 Harvard street, Washington, D C.



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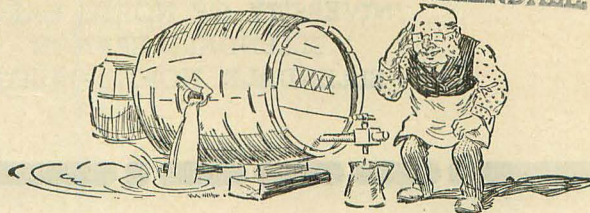
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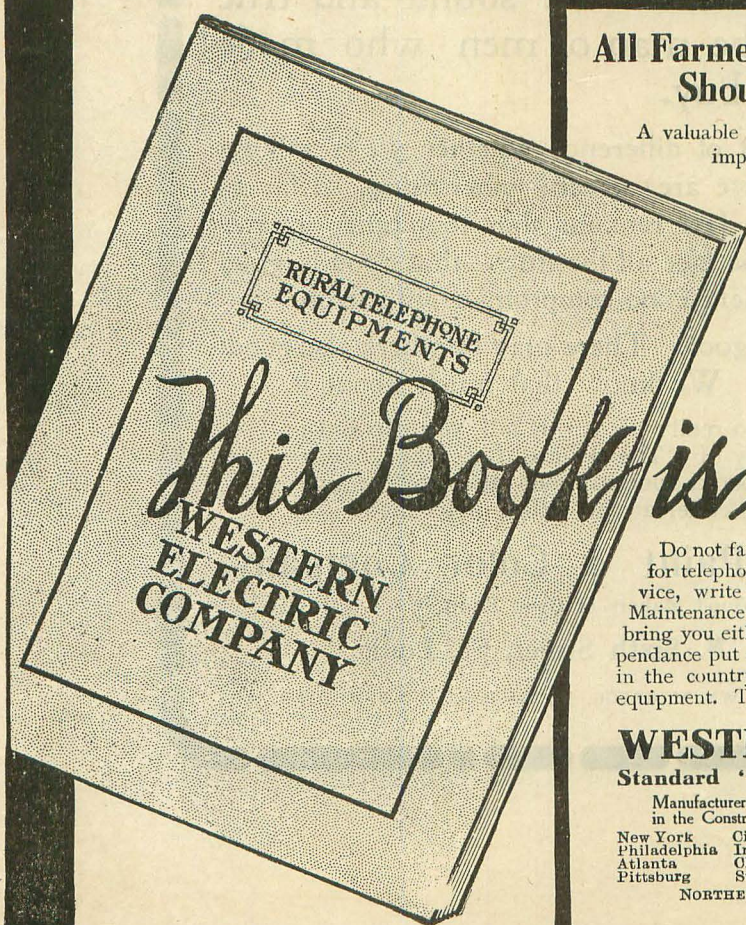
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